REPORT RESUMES

ED 018 250 PS 000 278

RESULTS OF THE SUMMER 1965 PROJECT HEAD START. VOLUMES I AND II.

BY- CORT, H. RUSSELL, JR. AND OTHERS

PLANNING RESEARCH CORP., WASHINGTON. D.C.

REPORT NUMBER PRC-R-795 PUB DATE 9 MAY 66

REPORT NUMBER OEO-753

EDRS PRICE MF-$2.25 HC-$22.52 561P.

DESCRIPTORS- *PROGRAM EVALUATION, *PRESCHOOL EDUCATION, SUMMER PROGRAMS, *CULTURALLY DISADVANTAGED, *PRESCHOOL CHILDREN, *PARTICIPANT CHARACTERISTICS, ADMINISTRATIVE ORGANIZATION, TEACHER CHARACTERISTICS, COGNITIVE DEVELOPMENT, SOCIAL DEVELOPMENT, FAMILY CHARACTERISTICS, CHILD DEVELOPMENT CENTERS, MEDICAL EVALUATION, TEACHER ATTITUDES, HEAD START, COMMUNITY ACTION PROGRAM, PPVT, PSYCHOLOGICAL SCREENING PROCEDURE, PRIMARY MENTAL ABILITIES, DAP, PSI, STANFORD BINET,

AN OVERALL SURVEY AND ANALYSIS OF THE SUMMER 1965 PROJECT HEAD START IS PRESENTED IN THIS REPORT. THE FIRST SECTION DISCUSSES THE INCEPTION, IMPLEMENTATION, AND FORMAL ORGANIZATION OF THE PROJECT. THE SECOND SECTION PRESENTS DETAILED INFORMATION ON THE COMMUNITIES, CHILDREN, PARENTS, STAFF, AND WORKERS INVOLVED IN THE PROJECT. THE THIRD SECTION DISCUSSES AND EVALUATES SPECIFIC HEAD START PROGRAMS. THE FOURTH SECTION CONSIDERS THE IMPACT OF THE HEAD START PROGRAM ON THE PARTICIPATING COMMUNITIES, ON THE HEALTH, MENTAL DEVELOPMENT, AND SOCIAL DEVELOPMENT OF THE CHILDREN, ON THE PARENTS, AND ON THE STAFF OF THE CHILD DEVELOPMENT CENTERS. THE FINAL SECTION SUMMARIZES THE RESULTS AND PRESENTS SEVERAL SPECIFIC RECOMMENDATIONS. VOLUME II OF THE REPORT CONTAINS THE APPENDIXES. (DR)

11

ED018250

RESULTS OF THE SUMMER 1965 PROJECT HEAD START

PRC R-795

VOLUME I

9 May 1966

Prepared for

OFFICE OF ECONOMIC OPPORTUNITY
DIRECTOR, PROJECT HEAD START RESEARCH AND EVALUATION
Under Contract OEO-753

By

H. Russell Cort, Jr.
William D. Commins, Jr.
Kenneth L. Deavers
Ruth Ann O'Keefe
James F. Ragan, Jr.

PS000278

PLANNING RESEARCH CORPORATION
LOS ANGELES, CALIFORNIA WASHINGTON, D.C.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

RESULTS OF THE SUMMER 1965 PROJECT HEAD START

PRC R-795

VOLUME I

9 May 1966

Prepared for

OFFICE OF ECONOMIC OPPORTUNITY
DIRECTOR, PROJECT HEAD START RESEARCH AND EVALUATION

PLANNING RESEARCH CORPORATION
LOS ANGELES, CALIFORNIA   WASHINGTON, D.C.

PS 000278

ABSTRACT

Data on children, parents, workers, programs, and communities involved in the Summer 1965 Project Head Start have been collected and analyzed. Descriptions and evaluations of the participants, operations, and results of the program are presented. Implications for future planning and research are noted.

TABLE OF CONTENTS

Page

ABSTRACT iii

INTRODUCTION xv

I. HISTORY I-1

II. DESCRIPTION OF HEAD START COMMUNITIES AND PARTICIPANTS II-1

- A. Introduction II-1
- B. Head Start Communities II-2
- C. Head Start Children II-21
- D. Head Start Parents and Families II-96
- E. Head Start CDC Staff and Workers II-122
- F. The National Samples II-148

III. PROGRAMS III-1

- A. Introduction III-1
- B. Background Information III-2
- C. CDC Services, Activities, and Resources III-12

IV. RESULTS IV-1

- A. Introduction IV-1
- B. Impact on Communities IV-2
- C. Impacts on Children IV-28
- D. Impact of Head Start on Parents IV-128
- E. Impacts on CDC Staff Workers IV-138

V. SUMMARY AND RECOMMENDATIONS V-1

- A. Summary V-2
- B. Recommendations V-15

LIST OF REFERENCES R-1

LIST OF EXHIBITS

Page

I-1 Organization Chart of OEO I-4

I-2 Organization Chart of CAP I-5

I-3 Summer 1965 Head Start Organization Chart I-7

I-4 Head Start Task Evaluation Flow Chart I-8

I-5 Research and Evaluation Flow Chart I-15

II-1 Counties Served by Head Start II-3

II-2 Regional Distribution of Total and Head Start Populations II-4

II-3 Family Income by Region II-5

II-4 Urban-Rural Distribution of Head Start Children . . . II-7

II-5 Special-Target Counties II-9

II-6 Concentration of Head Start Children in Special-Target Counties II-11

II-7 Characteristics of Special-Target Counties II-18

II-8 General Characteristics of Cultural Deprivation . . . II-22

II-9 Age II-27

II-10 Sex II-27

II-11 Race II-29

II-12 Cultural Background II-29

II-13 Size of Household II-31

II-14 Family Income II-33

II-15 With Whom Child Lives II-33

II-16 Mother's Education II-34

II-17 Does Mother Work? II-34

LIST OF EXHIBITS
(Continued)

Page

II-18 Child's Race II-35

II-19 Family Income II-37

II-20 Mother Works Outside the Home by Family Income . II-39

II-21 Number of People in Household by Education of Mother II-40

II-22 Income by Child's Race II-41

II-23 Household Size by Income II-42

II-24 Household Size by Ethnic Classification II-43

II-25 Medical/Dental History (Total) II-47

II-26 Medical/Dental History and Race II-49

II-27 Medical/Dental History: Head Start Survey Comparisons II-50

II-28 Immunization History (Total) II-51

II-29 Immunization History and Race II-52

II-30 Immunization History: Survey Comparisons II-54

II-31 Examination Results (Total) II-57

II-32 Medical Impressions: Survey Comparisons II-61

II-33 Diagnoses and Impressions II-65

II-34 PPVT Pretest Scores by Age II-68

II-35 PPVT Pretest Scores by Race II-69

II-36 PPVT Pretest Scores by Sex II-70

II-37 PPVT Pretest Scores by Family Intactness II-71

II-38 PPVT Pretest Scores by Household Size II-72

LIST OF EXHIBITS
(Continued)

Page

II-39 PPVT Pretest Scores on the Basis of Whether the Mother Works II-73

II-40 PPVT Pretest Scores by Urbanization II-74

II-41 PPVT Pretest Scores by Income II-75

II-42 PPVT Pretest Scores by Region II-76

II-43 Psychological Screening Procedure: Symptoms (Nationwide Sample) II-80

II-44 Psychological Screening Procedure: Typologies (Nationwide Sample) II-82

II-45 Psychological Screening Procedure: Referrals . . . II-83

II-46 Psychological Screening Procedure: Symptoms (Berlin) II-84

II-47 Psychological Screening Procedure: Typologies (Berlin) II-85

II-48 Activities, Habits and Environment (Total) II-87

II-49 Activities, Habits and Environment (White) II-89

II-50 Activities, Habits and Environment (Negro) II-91

II-51 Lingual Background II-95

II-52 Family History: Parents (Total) II-97

II-53 Family History: Parents (White-Negro) II-100

II-54 Description of Mothers (Total) II-105

II-55 Description of Mothers (White) II-106

II-56 Description of Mothers (Negro) II-107

II-57 Description of Fathers (Total) II-108

II-58 Description of Fathers (White) II-109

LIST OF EXHIBITS
(Continued)

		Page
II-59	Description of Fathers (Negro)	II-110
II-60	Description of Families (Total)	II-112
II-61	Description of Families	II-114
II-62	Family Habits (Total)	II-117
II-63	Family Habits (White)	II-118
II-64	Family Habits (Negro)	II-119
II-65	Staff and Worker Characteristics	II-128
II-66	Three-Way Classification of Staff and Workers	II-132
II-67	Selected Characteristics of Professional Staff Members by Age	II-133
II-68	Characteristics of Subprofessional Workers	II-135
II-69	Training and Experience of Head Start Teachers . . .	II-136
II-70	Worker Attitudes (Berlin)	II-141
II-71	Comparison of 1-Percent Samples with Census Tabulations	II-150
II-72	Analysis of Differential Impact on Children With Low Pre-PPVT Scores	II-154
II-73	Comparison of Children Having Matched PPVT Scores With Those Without Them	II-156
III-1	Seven Head Start Regions	III-3
III-2	State and Regional Distribution of Federal Head Start Funds and Child Development Centers	III-4
III-3	State and Regional Expenditures Per Pupil (Head Start Versus Public School Systems)	III-7
III-4	Medical/Dental Planning	III-13
III-5	Organizations Providing Assistance	III-14

LIST OF EXHIBITS
(Continued)

		Page
III-6	Availability of Services - Workers' Evaluations . .	III-16
III-7	Medical/Dental Examinations - Workers' Opinions	III-19
III-8	Medical Consultant Report	III-21
III-9	Program Characteristics - Workers' Evaluations . .	III-24
III-10	Services and Activities - Workers' Opinions	III-28
III-11	Program Characteristics - Educational Consultants' Report	III-30
III-12	Availability of Social Services - Workers' Evaluation	III-34
III-13	Parent Participation - Educational Consultants' Reports	III-35
III-14	Selected NUEA Trainee Characteristics	III-37
III-15	Experience of NUEA Trainees	III-38
III-16	Staff and Workers - Consultants' Comments	III-41
IV-1	Head Start Grantees and Sponsors by Category	IV-5
IV-2	Organizations Providing Assistance by Region	IV-6
IV-3	Plans for Full-Year Child Development Center	IV-11
IV-4	Plans for Follow-Through in Elementary Schools . .	IV-12
IV-5	Plans for Fall Programs	IV-15
IV-6	Organization of Operation Head Start, Omega County	IV-18
IV-7	Health Referrals	IV-31
IV-8	PPVT Mean Raw Scores (Nine Studies)	IV-34
IV-9	Comparison of PPVT Scores by Age	IV-36
IV-10	Comparison of PPVT Scores by Race	IV-37

LIST OF EXHIBITS
(Continued)

Page

IV-11 Comparison of PPVT Scores by Sex IV-38

IV-12 Comparison of PPVT Scores by Family Intactness . . IV-39

IV-13 Comparison of PPVT Scores by Household Size IV-40

IV-14 Comparison of PPVT Scores on the Basis of Whether the Mother Works IV-41

IV-15 Comparison of PPVT Scores by Urbanization IV-42

IV-16 Comparison of PPVT Scores by Income IV-43

IV-17 Comparison of PPVT Scores by Region IV-44

IV-18 Comparison of PPVT Scores by Family Income (Two Levels) IV-45

IV-19 Comparison of PPVT Scores by Income and Race . . IV-50

IV-20 Comparison of PPVT Scores by Urbanization and Race IV-51

IV-21 Comparison of PPVT Scores by Urbanization and Family Intactness IV-52

IV-22 Comparison of PPVT Scores by Urbanization and Income IV-53

IV-23 Comparison of PPVT Scores by Race and Degree of Mother's Education IV-54

IV-24 Comparison of PPVT Scores by Race and Whether Mother Works IV-55

IV-25 Comparison of PPVT Scores by Family Intactness and Sex IV-56

IV-26 Comparison of PPVT Scores by Race and Sex IV-57

IV-27 Comparison of PPVT Scores by Urbanization and Sex IV-58

IV-28 Comparison of PPVT Scores by Family Intactness and Race IV-59

LIST OF EXHIBITS
(Continued)

		Page
IV-29	PPVT Change in Relation to Initial Score (Eisenberg)	IV-66
IV-30	Distribution of PPVT Raw Scores by Chronological Age (Eisenberg)	IV-68
IV-31	Summary of PPVT and DAP Scores (Eisenberg)	IV-69
IV-32	Effects of Special Training in Perceptual and Conceptual Skills (Eisenberg)	IV-72
IV-33	Cognitive Study Results (Holmes and Holmes)	IV-74
IV-34	Preschool Inventory Results (Horowitz and Rosenfeld)	IV-81
IV-35	PPVT and PSI Test Results (Pierce-Jones)	IV-83
IV-36	PMA Test Results (Chesteen)	IV-88
IV-37	Summary of Pre-DAP Scores--Grouped by Family Income Level (Jacobs and Shafer)	IV-92
IV-38	Summary of Pre-DAP Scores--Grouped by Parents' Education (Jacobs and Shafer)	IV-92
IV-39	PSI Test Results (Silberstein)	IV-94
IV-40	Metropolitan Readiness Test Results (A)	IV-96
IV-41	Metropolitan Readiness Test Results (B)	IV-96
IV-42	IQ Comparisons, DAP and PPVT (Eisenberg)	IV-99
IV-43	IQ Scores Obtained on Different Tests (Eisenberg)	IV-99
IV-44	PPVT and DAP IQ Results (Johnson)	IV-100
IV-45	PPVT and S-B IQ Estimates (Ozer)	IV-100
IV-46	Impact on Social Behavior (Harding, Warminster Township)	IV-111
IV-47	Impact on Classroom Behavior (Van Egmond)	IV-112

LIST OF EXHIBITS
(Continued)

Page

IV-48 Summary of Projective Test Results (Holmes and Holmes) IV-115

IV-49 Selected Sample Characteristics (Lamb) IV-117

IV-50 Changes in Head Start Children (Workers' Opinions) IV-119

IV-51 Changes in Head Start Children - Parents' Opinion (Total) IV-122

IV-52 Changes in Head Start Children - Parents' Opinion (White) IV-123

IV-53 Changes in Head Start Children - Parents' Opinion (Negro) IV-124

IV-54 Effects on Parents - Total (Percent) IV-129

IV-55 Effects on Parents - White (Percent) IV-130

IV-56 Effects on Parents - Negro (Percent) IV-131

IV-57 Effects on Parents - Workers' Opinions IV-133

IV-58 Benefits of Workers' Participation - Workers' Ratings IV-139

IV-59 Worker Enthusiasm - Workers' Opinion IV-142

INTRODUCTION

This is a report on results of the 1965 Project Head Start, prepared by the Planning Research Corporation (PRC) under Contract OEO-753. The task called for in this contract was to prepare a report that would assist OEO in evaluating the accomplishments of the 1965 Project Head Start. The task was accomplished by collecting, analyzing, evaluating, and integrating all available data from a variety of sources. The basic organization of the report was developed under the direction of the Director of Research and Evaluation for Project Head Start, Dr. Edmund W. Gordon.

There were eight primary sources of data:

1. Tabulations of data on a 1-percent nationwide sample of Head Start children made by the U.S. Bureau of the Census, and computer data files and reports of essentially the same sample prepared by the OEO Information Center.
2. Tabulations and processed data from questionnaires filled out by staff members and workers in Child Development Centers (CDC's) from which the 1-percent sample of children was drawn.
3. Results of interviews of a stratified national sample of parents of Head Start children conducted by the National Opinion Research Center (NORC) for OEO.
4. Reports of medical, educational, and child development consultants to OEO.
5. All available preliminary and final reports of independent research and evaluation studies performed for OEO.
6. Available reports of local studies, not funded by OEO, conducted during or after the Summer 1965 Head Start program.
7. Program proposals submitted to OEO in the spring of 1965, and various OEO brochures, reports, and program documentation.
8. Census statistics on communities and demographic distributions.

PRC reviewed a large amount of literature, including newspaper articles, and talked with many people who were connected with Head Start either during the summer of 1965 or subsequently. However, it is information from the sources listed above that is documented and analyzed in this report. We have made interpretive comments on the data where it has seemed appropriate, but we have also presented as much data as possible so that the reader can make his own analyses and interpretations.

Throughout the report certain terms have been used as descriptive shorthand labels without careful or precise definition. The primary case in point is the term "cultural deprivation," or its adjectival form "culturally deprived." Variations of the term are "socially disadvantaged," "low income," "poor," and "culturally disadvantaged." These terms appear throughout the technical literature with varying degrees of specificity and consistency.

The problem of definition here is that the concept of cultural deprivation is a relative, behavioral concept. It has nothing inherently to do with ethnic background, geography, education or occupation of parents, etc. It is possible that, at least on many tests, a low-income "socially handicapped" preschooler may be indistinguishable from a middle-income slow learner, for example. In this report, we take the term "culturally deprived" to refer to children who come from low-income families and who are likely to encounter increasing difficulties in achievement in school, or purely for convenience, to the children in the program.

Another term that is used with varying degrees of precision in this report is "impact." It should refer, specifically, to an observable change unambiguously attributable to a definable treatment. This idealistic concept is virtually unobtainable in large programs for a variety of reasons, including cost, political constraints on experimental designs, and the state of the art in measurement. We have generally taken impact to refer to an implied change or modification. There is no implied duration of change. Of course, indications of change do not necessarily prove that change actually occurred, any more than absence of indication of change proves that none occurred.

We have not attempted to examine problems of construct and predictive validity with various tests. Similarly, we have not attempted to assess or estimate test reliability in depth. Generally we have tried to analyze results as objectively as possible, with full awareness of many uncertainties and constraints.

The report contains five major sections. Section I is a history of Project Head Start in 1965. Section II contains descriptive data on the communities and participants in the summer program. It also contains a discussion of the characteristics of the samples of data used. Section III describes various aspects of the programs carried out at Child Development Centers. It also contains evaluations and opinions of workers, parents, and consultants about the different features or program characteristics. Section IV provides data on and evaluations of the impact or effectiveness of the 1965 Project Head Start. Impacts on communities, children, parents, and staff members are discussed in turn. Section V is a summary of significant findings and conclusions. A list of recommendations for future planning is given. The List of References contains all reports, published and unpublished, used in preparing this report. For the convenience of researchers who wish to pursue the collection and exchange of data in their areas of interest, we have provided the addresses of the principal investigators who conducted independent research studies for OEO.

Appendix A contains copies of the research instruments used in the program, with the exception of the Peabody Picture Vocabulary Test (PPVT). For ease of reference, items from these instruments are referred to in the text by their number on the form. Appendix B provides a description of the statistical models used in analyzing PPVT scores and National Opinion Research Center (NORC) data. Appendix C presents height and weight centiles by age and sex for children included in the 1-percent sample. Appendix D gives a further discussion of the economic characteristics of the population served in the Head Start program. Appendix E provides a comparison of IQ scores for children who received more than one type of intelligence test. Appendix F presents the results of an analysis of variance of CDC's, where the measures of center performance were PPVT D-scores. Appendix G presents the response frequencies of different types of CDC staff members in the national 1-percent sample to questions on the Paid and Voluntary Workers' Evaluation Form. Appendix H provides a summary of several additional Head Start studies that were received shortly before our publication deadline. Several reports on language are of particular interest. It was our original intention to cover this topic in the body of the text. However, pressures of time have made it necessary to treat this subject separately in an appendix. Exigencies of time also forced analyses of the nationally collected scores on the Pre-School Inventory and the Behavior Inventory to be treated in a separate appendix. Appendix I presents conclusions from analyses of results of these two tests. It also provides results of analyses of intercorrelations between the Peabody Picture Vocabulary Test, the Pre-School Inventory, and the Behavior Inventory.

This report is the result of the efforts of a large number of people. We should like to express our appreciation for the assistance and cooperation of personnel in OEO and of others associated with Project Head Start. We especially wish to acknowledge the contributions of Dr. Robert S. Drachman, The Johns Hopkins Hospital, Baltimore, Maryland, who devoted much time and effort in assisting with analysis and interpretation of the medical and dental data. We have incorporated his suggestions and recommendations in the text wherever possible.

Finally, much credit must be given to the PRC technical personnel who contributed to the project in all areas:

David R. Alexander
Jules P. Aronson
Miss Patricia A. Eller
Mrs. Naomi H. Henderson
Dr. Norman W. Kettner
Walter Lawrence
Miss Lynn W. Paul

17

Patrick W. Roche
James F. Rowe
Mrs. Susan Starr

The project has been performed under the supervision of Dr. Allen R. Ferguson, Deputy Manager, Systems Economics Division. Dr. H. Russell Cort, Jr., was the Project Manager.

I. HISTORY

Head Start began as an idea--an idea that the culturally deprived child is a key element in the poverty cycle, and that to break the cycle, one needs to reach these children early. This idea and Project Head Start have become a primary strategic component of the War on Poverty. As President Johnson has stated, a major goal of this war is to save the children of poverty from passing "poverty's curse" onto their offspring "like a family birthmark."

The reasoning behind this idea is quite simple. Experience has shown that the child from an economically or socially deprived home lags behind his classmates before he embarks upon his formal education. The child from a more affluent home has been surrounded by a relatively diversified and intellectually stimulating environment in his first 4 or 5 years, while the deprived child is apt to have a more restricted range of experiences. It is not uncommon for the underprivileged child to enter school with a severely limited vocabulary and little contact with books, storytelling, or even crayons. His experiences with the world around him are equally limited. He may receive little encouragement for exploring his world, noticing different relationships in it, attempting new tasks, and forming abstract concepts. He may experience quite different patterns of reinforcement than the non-socially disadvantaged child. This social and educational poverty is typically produced by the economic poverty of the family. Many of these children are also lacking in medical and dental care; they may be poorly fed and poorly clothed. Thus, the whole child is affected by his poverty-stricken environment.[1]

Having identified early childhood as one of four crisis points in a person's life, an OEO Staff Committee, assembled to evaluate the National Poverty Program, recommended that a high priority be given to establishing some sort of operation to widen the perspectives of deprived children.

---

[1] More extensive discussion of these points is given in Section II.

Acting on this recommendation, Mr. Sargent Shriver and Dr. Jerome Bruner[1] reviewed the idea and decided that such a program was both desirable and feasible. Further staff meetings provided the program with a name, and Project Head Start was on its way. At this point, Head Start was expected to serve some 100,000 culturally disadvantaged children from 200 communities across the nation.

A National Planning Committee for Head Start was organized. This committee, headed by Dr. Robert E. Cooke,[2] was asked to suggest the specific objectives and kinds of programs that might be most effective in meeting the challenge of Project Head Start. These programs were to increase the achievements of and opportunities for poor children.[3]

As conceived by this committee, Project Head Start was to be an experience in early childhood development, not merely a pre-school reading readiness program. All aspects of the child were to be served, with basic goals being improvement of the child's physical and mental health, emotional and social development, improvement in conceptual and verbal skills, greater self-confidence, better family relations, development of a responsible attitude toward society, and, finally, an increased sense of dignity and self-worth.

Head Start was publicly announced on Friday, February 19, 1965 at the White House. With Mrs. Johnson acting as Chairman, Dr. Julius Richmond[4] acting as Project Director, and many prominent citizens lending their support, the campaign to arouse community interest in Head Start began. A letter was sent by Mr. Shriver to various public officials throughout the country inviting their communities to participate in Head Start. As the responses to this letter came in, the first evidence accumulated indicated that the projected program was not nearly large enough to meet the surge of local interest. Some projections done by the Research, Plans, Programs, and Evaluation Division of OEO[1] showed that as many as 600,000 to 1,200,000 children might be reached.

---

[1] Professor of Psychology, Harvard University.

[2] Given Foundation Professor of Pediatrics, School of Medicine, Johns Hopkins University.

[3] It will be recalled that these children have previously been described as culturally deprived. This descriptive phrase has been the cause of considerable disagreement. Disagreement has occurred over attempts to identify the contributory elements and observable consequences of such a state, over efforts to determine the possibility (or impossibility) of constructing an index to measure it, over whether programs in fact served children who could appropriately be said to suffer from it; etc. However, for purposes of this report, culturally deprived and poor are taken as synonomous.

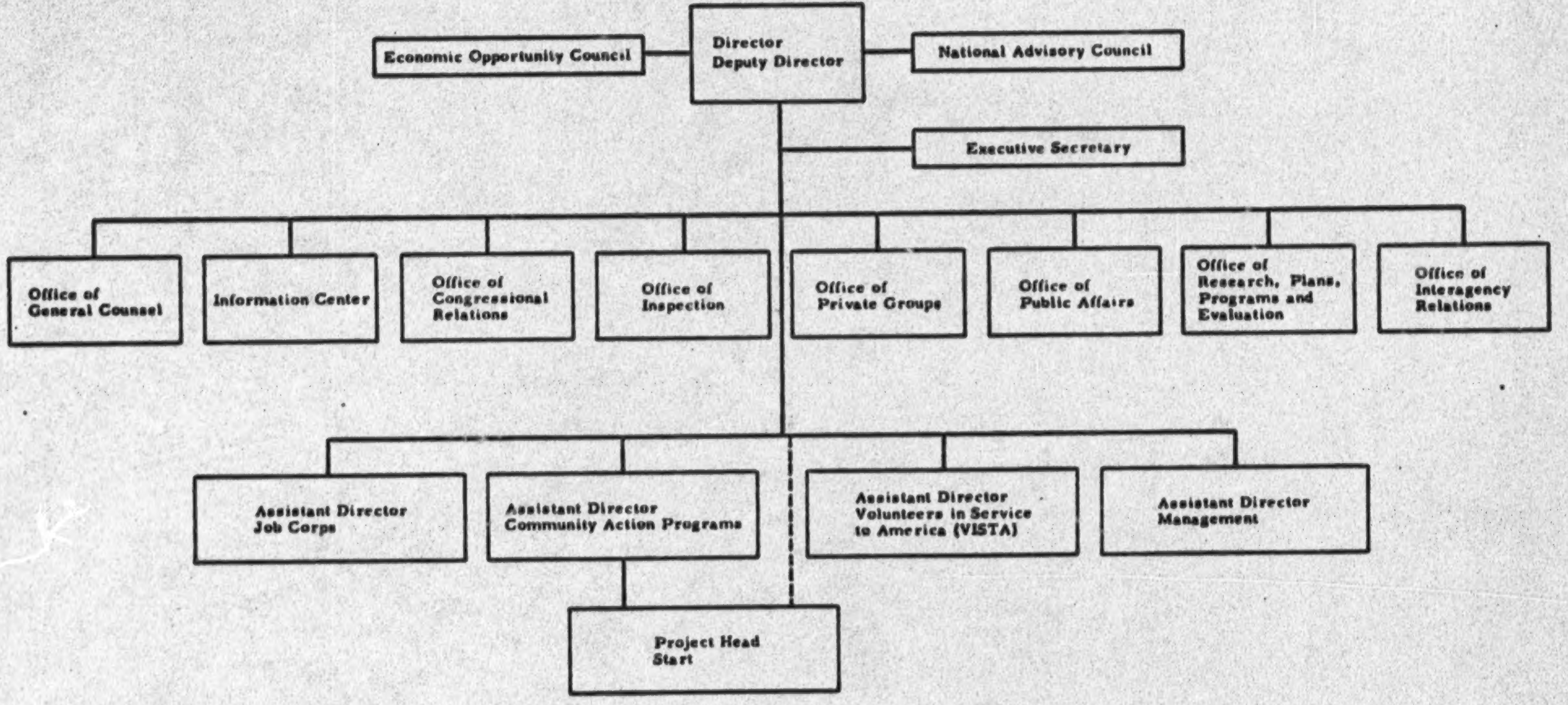
[4] Dean of Medical Faculty, State University Upstate Medical Center, Syracuse, New York.

Project Head Start was a national program in that broad guidelines, overall administration, and the bulk of the financing were provided by the Federal Government. But the programs that were chosen to execute these broad guidelines, the administration of the individual programs, and provision of the necessary physical facilities and personnel were all provided by the local communities. OEO set up qualifications for determining the eligibility of applicants for grants to operate Head Start summer programs. Since Head Start was a part of the Community Action Program (see Exhibit I-2), the applications were to be prepared and submitted in cooperation with the local Community Action agency. In the absence of a local Community Action program, other public agencies such as local school boards or private non-profit organizations were eligible. In the latter case, particular care was taken to ensure that the private organization would in fact undertake a program that met local needs. Application materials went out to prospective grantees beginning in late February, with an April 15th deadline for their return. This deadline was not adhered to, and receipt and processing of the applications continued until funds were exhausted.

The processing of the completed applications was an immense task. The staff of Head Start numbered only about 300 people at its peak, and many of these people were hired only on a temporary basis. However, they all worked with dedication, sometimes for as long as 16 hours a

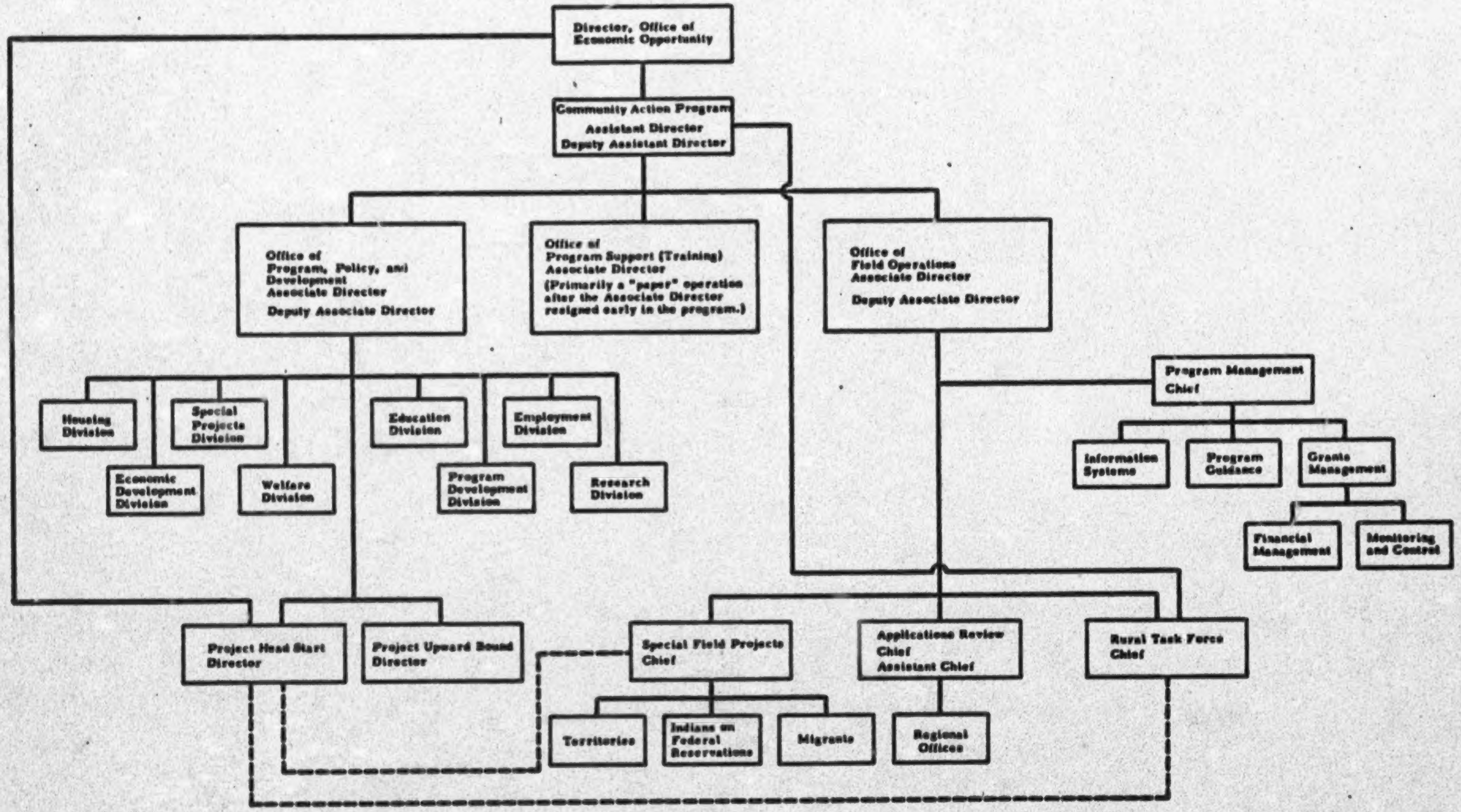
---

[1] Exhibit I-1 shows the organization of OEO.


Economic Opportunity Council
Director
Deputy Director
National Advisory Council
Executive Secretary
Office of General Counsel
Information Center
Office of Congressional Relations
Office of Inspection
Office of Private Groups
Office of Public Affairs
Office of Research, Plans, Programs and Evaluation
Office of Interagency Relations
Assistant Director Job Corps
Assistant Director Community Action Programs
Assistant Director Volunteers in Service to America (VISTA)
Assistant Director Management
Project Head Start

[1] This chart is intended to be a representation of the organization of the Office of Economic Opportunity during the Summer of 1965.

EXHIBIT I-1 ORGANIZATION CHART OF OEO


Director, Office of Economic Opportunity
Community Action Program
Assistant Director
Deputy Assistant Director
Office of Program, Policy, and Development
Associate Director
Deputy Associate Director
Office of Program Support (Training)
Associate Director
(Primarily a "paper" operation after the Associate Director resigned early in the program.)
Office of Field Operations
Associate Director
Deputy Associate Director
Housing Division
Economic Development Division
Special Projects Division
Welfare Division
Education Division
Program Development Division
Employment Division
Research Division
Program Management Chief
Information Systems
Program Guidance
Grants Management
Financial Management
Monitoring and Control
Project Head Start Director
Project Upward Bound Director
Special Field Projects Chief
Territories
Indians on Federal Reservations
Migrants
Applications Review Chief
Assistant Chief
Regional Offices
Rural Task Force Chief

1/ This chart is intended to be a representation of the organization of the Community Action Program during the Summer of 1965.

EXHIBIT I-2 ORGANIZATION CHART OF CAP

day, 6 days a week, to get the job done. An organization chart for Head Start Summer 1965 is shown in Exhibit I-3.

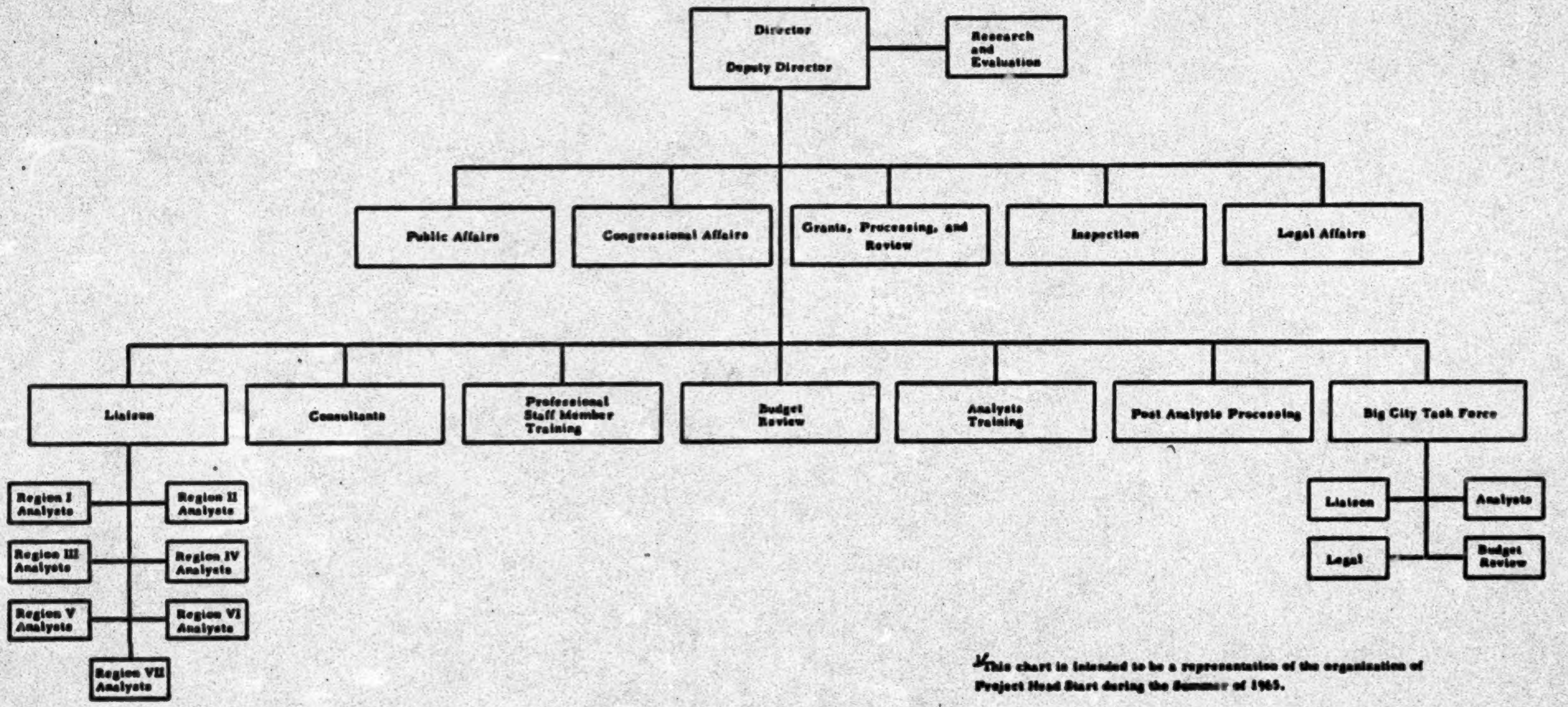
The local Head Start programs were to be organized into Child Development Centers (CDC's). These centers were to be the focus of all activities relating to the child. With the classrooms and outdoor play areas comprising the physical plant, other materials and services to be offered by the community were concentrated in the CDC. Considerably more detail on the CDC and its organization and operation appears in Section III. It should be noted that this focus of activity was one of the more novel aspects of Head Start.

The application review process was a detailed, multi-stage operation (see Exhibit I-4). Qualifications for the Center's staff director and professional personnel were established. These included degrees in education (with majors in early childhood, kindergarten, human growth and development, or elementary education) and degrees in psychology, sociology, or home economics. Experience as a social worker, nursery school, kindergarten, or elementary school teacher, director of a day care center, or supervisor of playgrounds also qualified a person to assume a professional role in a center.

The proposed program was then evaluated in terms of the geographic area which it would cover. When available, information in the application was examined that described the socio-economic characteristics of the area in which the CDC would be located.

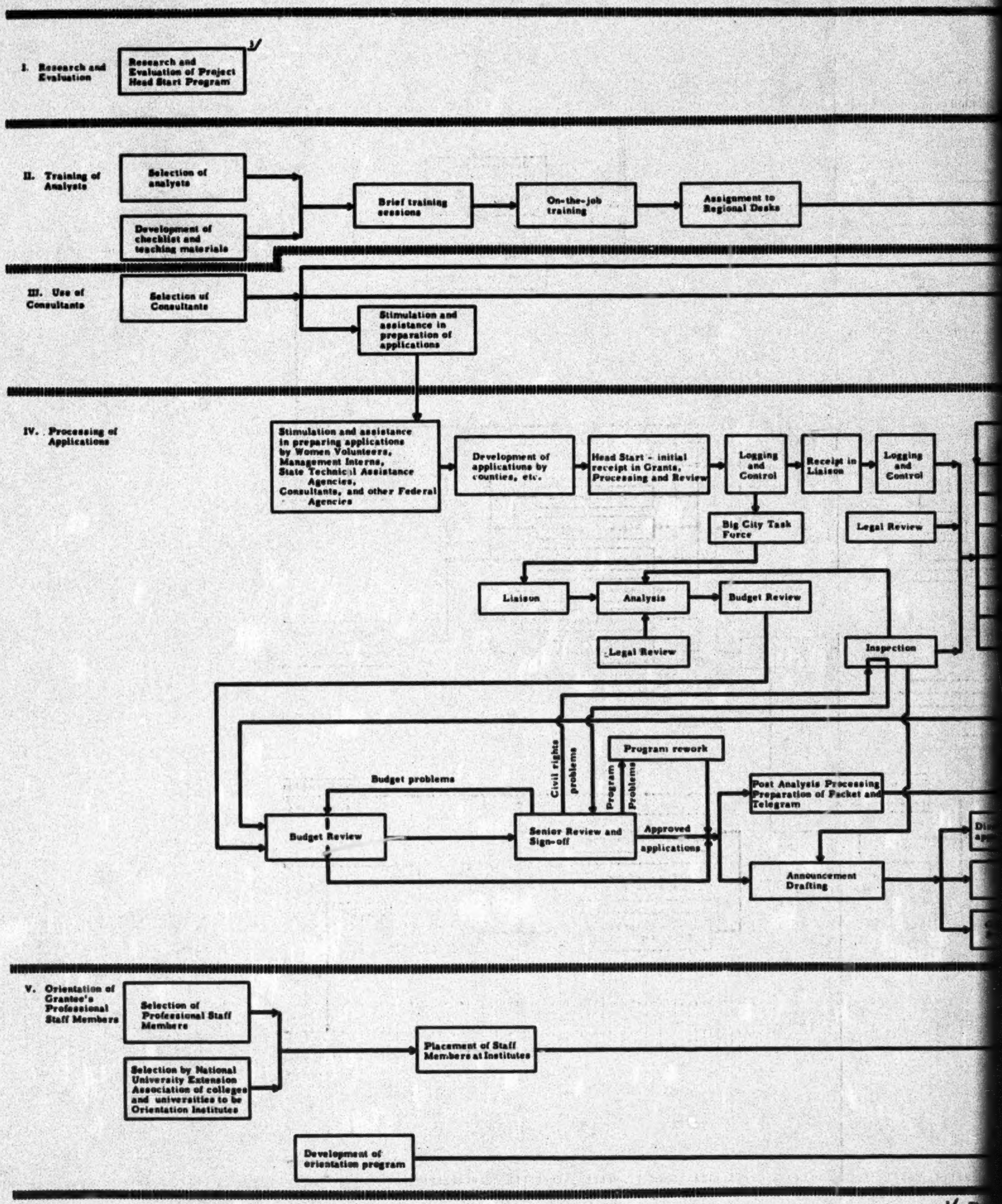
The age level of the children who would participate had to be ascertained, as well as economic conditions of their families. The analysts were instructed that 85 percent of the children were to be "poor." This economic criterion caused a considerable problem, since the OEO instructions accompanying the application forms said only: "family income need not be a specific requirement for admission, as long as the program is primarily reaching the poor within the neighborhood."

An attempt to solve this problem was made by including a statement about the economic composition of the participant families as a condition of grant. However, with family income information sketchy or unreliable,


Director
Deputy Director
Research and Evaluation
Public Affairs
Congressional Affairs
Grants, Processing, and Review
Inspection
Legal Affairs
Liaison
Consultants
Professional Staff Member Training
Budget Review
Analysts Training
Post Analysts Processing
Big City Task Force
Region I Analysts
Region II Analysts
Region III Analysts
Region IV Analysts
Region V Analysts
Region VI Analysts
Region VII Analysts
Liaison
Analysts
Legal
Budget Review

[1] This chart is intended to be a representation of the organization of Project Head Start during the Summer of 1965.

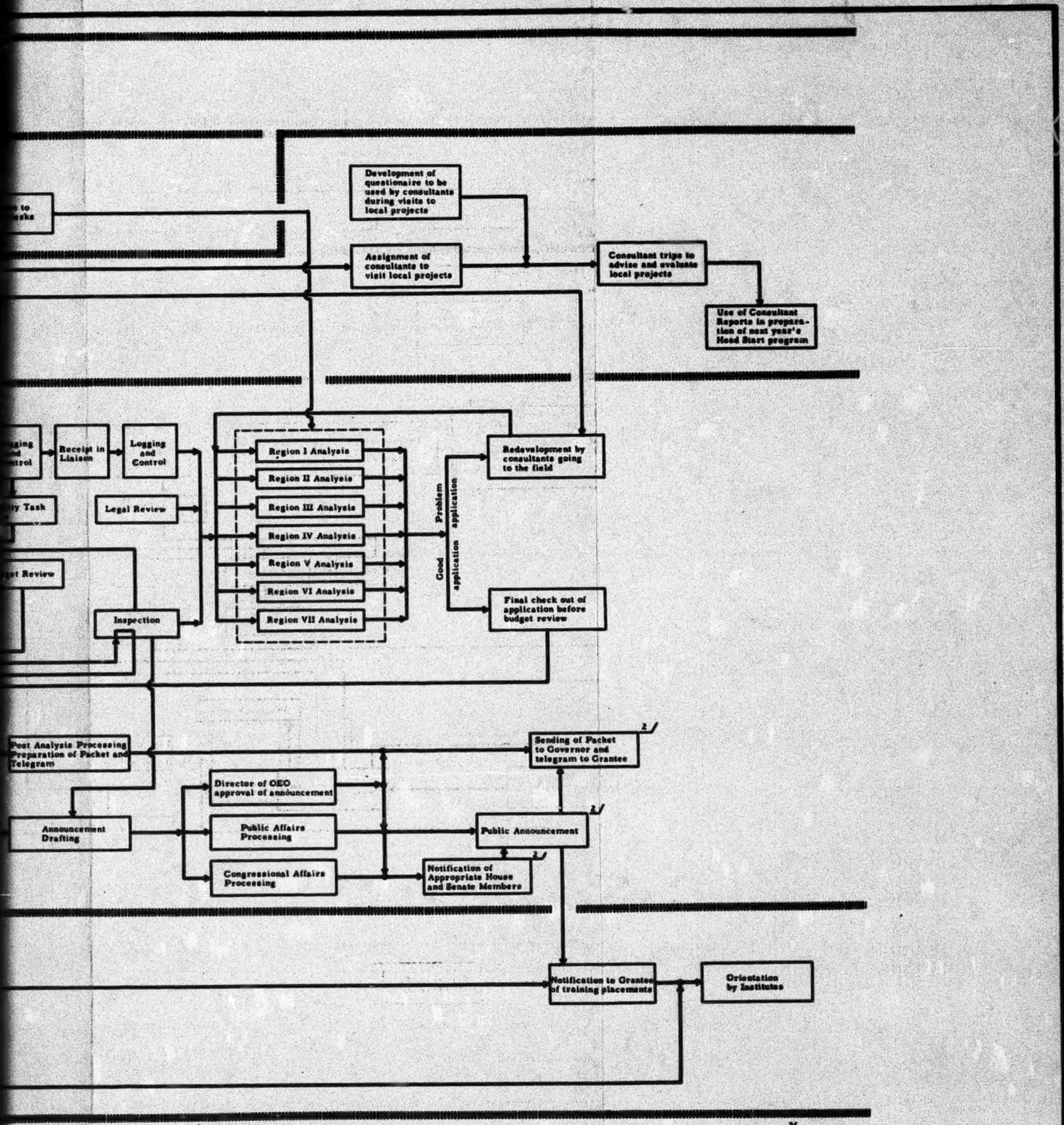
EXHIBIT I-3 SUMMER 1965 HEAD START ORGANIZATION CHART


I. Research and Evaluation
Research and Evaluation of Project Head Start Program
2/
II. Training of Analysts
Selection of analysts
Development of checklist and teaching materials
Brief training sessions
On-the-job training
Assignment to Regional Desks
III. Use of Consultants
Selection of Consultants
Stimulation and assistance in preparation of applications
IV. Processing of Applications
Stimulation and assistance in preparing applications by Women Volunteers, Management Interns, State Technical Assistance Agencies, Consultants, and other Federal Agencies
Development of applications by counties, etc.
Head Start - initial receipt in Grants, Processing and Review
Logging and Control
Receipt in Liaison
Logging and Control
Big City Task Force
Legal Review
Liaison
Analysis
Budget Review
Legal Review
Inspection
Program rework
Civil rights problems
Program Problems
Budget problems
Budget Review
Senior Review and Sign-off
Approved applications
Post Analysis Processing Preparation of Packet and Telegram
Announcement Drafting
V. Orientation of Grantee's Professional Staff Members
Selection of Professional Staff Members
Selection by National University Extension Association of colleges and universities to be Orientation Institutes
Placement of Staff Members at Institutes
Development of orientation program

[1] This chart is intended to be a representation of the Project Head Start Headquarters' process during the Summer of 1965.

[2] The first ber cos Gov not

EXHIBIT I-4 HEAD START TASK EVA


to
asks
Development of questionaire to be used by consultants during visits to local projects
Assignment of consultants to visit local projects
Consultant trips to advise and evaluate local projects
Use of Consultant Reports in preparation of next year's Head Start program
gging
nd
ntrol
Receipt in Liaison
Logging and Control
ity Task
Legal Review
get Review
Inspection
Region I Analysis
Region II Analysis
Region III Analysis
Region IV Analysis
Region V Analysis
Region VI Analysis
Region VII Analysis
Problem application
Good application
Redevelopment by consultants going to the field
Final check out of application before budget review
Post Analysis Processing Preparation of Packet and Telegram
Sending of Packet to Governor and telegram to Grantee
2/
Director of OEO approval of announcement
Announcement Drafting
Public Affairs Processing
Public Announcement
2/
Congressional Affairs Processing
Notification of Appropriate House and Senate Members
2/
Notification to Grantee of training placements
Orientation by Institutes

2/ The announcement of an approved grant was made in the following order: first by Congressional Affairs to the appropriate House and Senate members, second to the public by Public Affairs, and third Post Analysis Processing sent a telegram to the Grantee and the packet of materials to the Governor and the people in charge of Professional Staff Member training notified the Grantee as to where its Staff Members were to go for training.

1/ See Exhibit I-5

START TASK EVALUATION FLOW CHART

and with the use of "means tests" discouraged by OEO, the local communities experienced difficulty in achieving the desired ratio of "poor children."[1]

Another area of concern was parental involvement. The parents were to be included in the planning of the location of the center, its time of operation, and the kind of program envisioned. There was also to be provision of activities for parents' participation within the program.

Provisions for the medical services to be provided by the CDC were examined. Since in many instances Head Start was expected to be the first experience of the children with medical professionals, this aspect of the program was given considerable attention. Planning for follow-up medical services was to be of particular importance.

The nutritional program was also investigated. Meals and snacks were to be provided at the centers, with surplus foods to be used when possible. Plans to inform parents about family nutrition were to be considered. Physical facilities and transportation arrangements had to be provided; for instance, centers should be located so that the children did not have to ride a bus for more than 1/2 hour one way.

The budget had to satisfy a detailed analysis which established criteria for personnel costs, consultant and contracts services, travel, space, consumable and expendable supplies, rental or purchase of non-expendable items, and other items. An analysis then followed of the 10-percent share to be put up by the grantee to ascertain whether his money or in-kind contribution fulfilled the requirements imposed. For example, the costs of staff assigned to the program and the use of office space and office equipment were allowable, but time spent by members of the governing body or advisory committees of the applicant agency was not. The value of volunteers' services could be allowed, but at a rate not to exceed $1.50 per hour. And a community had to guarantee that the Federal money for Head Start would not be used to supplant local money already being spent.

---

[1] The definition of "poor" was modified several times as the review process continued. It began as a family income of $3,000 or less. Later, an allowance was made for differences in the size of family. Still later, some recognition was given to the differences in living costs for urban and rural areas. This process resulted in a precise definition of "poor" being made a part of the instructions to applicants for full-year Head Start grants.

The plan of daily activities was one of the more important policy considerations in Head Start planning. It was decided that Head Start should provide a variety of experiences to the children and prepare them in this way for the learning experience of school. Attitudes, life experiences, and interrelationships were to be acquired from individual attention and a wide variety of activity. A program that would provide this content was looked for in every application.

The proposed program was then evaluated in depth in terms of the following components:

- The medical program
- The social service program
- Parent activities
- Daily activities
- Training arrangements
- Follow-through
- Staffing
- Special quality factors

Analysts tried to incorporate as many of the features of what was considered an excellent program into every application. When a deficient program was submitted, a consultant was sent to help the prospective grantee, or analysts in the Head Start office helped the community to write a program. Not all programs were strong in all areas, and some were accepted with recognition that the programs were deficient.

The local communities were responsible for recruiting the children to be served by their Head Start programs. Various techniques were used by communities to perform this task, including:

- The usual census of the school districts, accomplished by sending letters to homes of children already enrolled in school.

- Advertisements in the local newspapers to explain the program and invite participation.
- Public meetings explaining Head Start.
- Announcements on local radio and/or television.
- House-to-house canvassing of the neighborhoods from which culturally deprived children were likely to come.

These techniques succeeded in encouraging the large summer 1965 turnout. As it happened, however, some of these techniques were not well suited to obtain participation from the economically and culturally disadvantaged population that was to constitute a majority of Head Start families. Use of the normal public or private school system records, or of mass communication, was likely to leave uninformed a large segment of this group. Moreover, publicity that accentuated the "poverty" aspects of Head Start unduly often discouraged potential participants because of the social stigma attached. This aspect of the recruiting effort offers some lessons for further Head Start activities. Sufficient data for a comprehensive evaluation of recruiting is not available, therefore this topic is not explored further in this report.

A special effort was made to encourage local programs in the nation's 300 lowest per capita income counties. Cards were made on all of these special-target counties, and in those cases where no response to Mr. Shriver's letter had been received, some county official was contacted. When necessary, a consultant was sent to help structure the programs, prepare the budgets, and complete the application forms. These consultants were drawn from the ranks of the government Management Interns. They went to these communities and met with the officials who would be instrumental in setting up the program. The interns instructed these officials in ways to arouse community support and in methods of fulfilling their portion of the cost when this was required. In all, the Management Interns made 169 visits to meetings attended by representatives from the 300 special-target counties and from 200 other counties adjacent to these areas. The participation of the 66 percent of the 300 special-target counties resulted largely from the concentrated efforts of OEO.

While the application forms were being prepared and distributed, OEO was planning the training of Head Start teachers. In its original report, the National Planning Committee had commented that:

> Personnel recruitment and training represents perhaps the most difficult logistical need. The numbers of health, social services, and educational personnel trained to work with young children are relatively small. The numbers trained to work with disadvantaged young children are only a fraction of the total. It is apparent, therefore, that heavy reliance must be placed on specially designed training programs which can be developed and implemented by early summer.

OEO realized that time did not allow it to negotiate individually with the schools that would prepare teachers and other staff in all regions of the country. Thus, a contract was signed with the National University Extension Association, with NUEA agreeing to coordinate the national training course for Head Start personnel.

A conference for representatives from all universities planning to participate in the teachers' training took place April 11 to 14, 16 days after the contract was signed with NUEA.

This conference was attended by representatives from 119 institutions. Administrative meetings dealt with matters related to subcontracts, the relationships existing among NUEA, OEO, training institutions, and Child Development Centers, and on-site administration of training programs. Curriculum aspects were discussed in terms of the sociology of poverty, education, health, nutrition, and parental involvement. At the conference, 118 institutions tentatively agreed to sponsor training sessions. When firm commitments were made by these institutions, subcontracts were issued by NUEA.

Allocations of Head Start staff were made on a state and regional basis. The plan proposed that teachers attend the institution closest to their homes. Where this was not possible, they were to be assigned to institutions in the general region of their locale. This plan was vastly complicated by the matching of numbers of teachers against spaces available and against the times of Head Start center openings. Also, the continued processing of Head Start grants meant that even well into June more teachers had to be assigned to the training sessions. When OEO contracted with NUEA, the number of teachers estimated to participate in the program was 12,000. In the end, 29,933 professional staff members were trained. This was one of the major logistic feats accomplished for the summer Project Head Start.

A major decision that had to be made before the classes were formed focused on child integration. It was decided that "freedom of choice," that is, freedom of a child to attend a school of his choosing, would be allowed in Head Start. However, every center was to be open to children regardless of their creed, color, or race. In order to effect this, the centers in the South which appeared to present a civil rights problem were advised to advertise that the centers were open to all. This injunction was not honored in many instances or the notice used ambivalent language, such as "Head Start" or "the program" is open to all.

One means of encouraging integration was to require that staff personnel of both Negro and white races be included in every center. The staffing pattern became the crux of compliance for the summer's program.

In order to evaluate compliance, the Office of Inspection made telephone inquiries before the approval of programs to all the applicants in Region Three, which was comprised of Tennessee, Alabama, Mississippi, Georgia, Florida, and South Carolina. In addition, checks were made on applicants from North Carolina, Virginia, the eastern shore of Maryland, Louisiana, Arkansas (with concentration on the eastern part), the southeastern corner of Oklahoma, the area east of Wichita Falls in Texas, and some locations in Delaware, West Virginia, and Kentucky. By June 1, 1,600 phone calls had been made. These applicants were asked how they intended to comply with the civil rights regulations and their answers were reported in writing by the telephone interviewers.

When the centers were in operation, numerous visits were made to them to investigate whether or not integration existed. In all, about 550 programs were visited by representatives of the Office of Inspection.

Given the limitations imposed by the relatively small staff of the General Counsel's Office and the Office of Inspection and the self-imposed restriction of the "freedom of choice" plan, the civil rights accomplishments were noteworthy. According to Office of Inspection estimates, 75 percent of the Head Start centers in the deep South were integrated; that is, there was integration of pupils and/or staff. In the upper South and border states, 90 percent integration was achieved. The General Counsel's Office is more conservative in its appraisal, and maintains that although much progress was made, much more needs to be done.

Between 5 and 10 percent of the Head Start programs were run, in whole or in part, by religiously affiliated organizations. A number of them were Negro groups in the south. In the large cities, there were numerous programs run by religious organizations, many of them Roman Catholic. In the major cities, the Diocesan schools usually sponsored a program of relatively large size; for instance, in New York City the Diocese of Brooklyn sponsored a program for 2,130 children, second in size to that run by the New York City Board of Education. In Chicago, the largest program was sponsored by the School Board of the Archdiocese of Chicago.

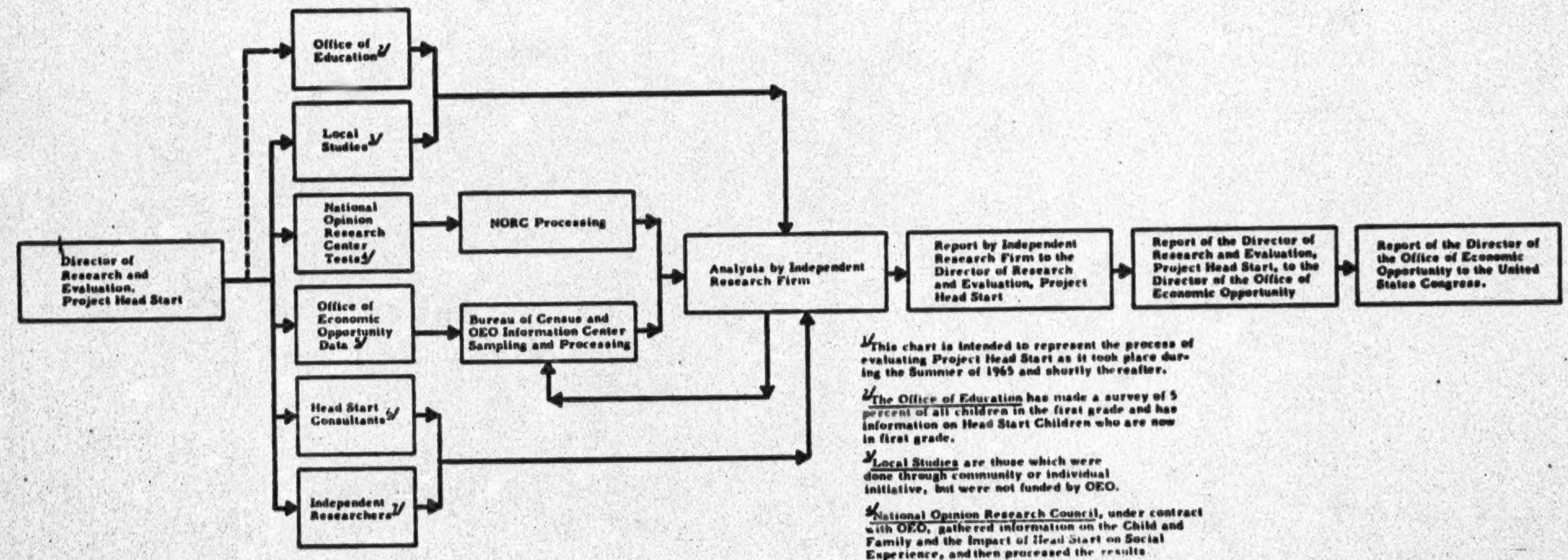
The policy of favoring a non-sectarian organization as the sponsor of a program was an issue in only a few cases. In general, all the forces that could be marshalled to establish centers were welcome. No major church-state problems arose in the Head Start operation.

From the beginning of Head Start, research and evaluation were to play an important role. A flow chart of the Research and Evaluation process of Project Head Start is shown as Exhibit I-5.

In April, Dr. Edmund Gordon[1] was appointed by OEO to direct and monitor this effort. In May he met with the Research Planning Committee to formulate the aims of the research program. A major policy decision was made that to the maximum extent possible the instruments used for research programs must have a service function also. Thus, tests administered were supposed to provide information that could be used to the benefit of teacher and child. However, there was strong interest in obtaining as much information as possible on the total Head Start population.

---

[1] Professor, Graduate School of Education, Yeshiva University, New York


Director of Research and Evaluation, Project Head Start
Office of Education 2/
Local Studies 3/
National Opinion Research Center Tests 4/
Office of Economic Opportunity Data 5/
Head Start Consultants 6/
Independent Researchers 7/
NORC Processing
Bureau of Census and OEO Information Center Sampling and Processing
Analysis by Independent Research Firm
Report by Independent Research Firm to the Director of Research and Evaluation, Project Head Start
Report of the Director of Research and Evaluation, Project Head Start, to the Director of the Office of Economic Opportunity
Report of the Director of the Office of Economic Opportunity to the United States Congress.

1/ This chart is intended to represent the process of evaluating Project Head Start as it took place during the Summer of 1965 and shortly thereafter.

2/ The Office of Education has made a survey of 5 percent of all children in the first grade and has information on Head Start Children who are now in first grade.

3/ Local Studies are those which were done through community or individual initiative, but were not funded by OEO.

4/ National Opinion Research Council, under contract with OEO, gathered information on the Child and Family and the Impact of Head Start on Social Experience, and then processed the results.

5/ The Office of Economic Opportunity gathered a larger amount of information, some on all Head children, some on only a sample. This information was then sampled and processed under contract by the Bureau of Census or the OEO Information Center. The tests and forms which OEO had completed were: PPVT; Preschool Inventory; Behavior Inventory; Psychological Screening; Staff Member Information Form. Paid and Voluntary Workers Evaluation; Parent Participation Record; Parent Evaluation of Project Head Start; Medical-Dental and Family Information; and the Worker Attitude Scale.

6/ The Head Start Consultants supplied some evaluative information by filling in the Consultants Checklist.

7/ The Independent Researchers were hired by OEO to examine and evaluate various parts of the Head Start program.

EXHIBIT I-5 RESEARCH AND EVALUATION FLOW CHART

Because of this interest, a large amount of testing and data collection was required of all centers. It will be noted later in this report that the burden of data collection placed on the centers was a source of considerable dissatisfaction at the operational levels.

The data collection and test instruments used were:

1. For Children
    a. Medical/Dental and Family History and Social Experience Information
    b. Psychological Screening Procedure

Given pre- and post- as measures of impact on children were:

    c. Pre-School Inventory including Goodenough Draw-A-Person
    d. Peabody Picture Vocabulary Test
    e. Behavior Inventory

2. For Staff and Workers
    a. Staff Member Information Sheet
    b. Paid and Voluntary Worker's Evaluation

Given pre- and post- as a measure of impact on staff and workers was:

    c. Worker Attitude Scale

3. For Parents
    a. Parent Participation Record
    b. National Opinion Research Center Parent Interview
4. Other
    Consultant Checklist

Copies of these instruments, excluding the Peabody Picture Vocabulary Test, appear in Appendix A.

The Head Start Research Office contracted with the National Opinion Research Center to conduct an extensive interview with the parents or guardians of a sample of 2,000 children. The material in the interview covered the social experience of the family, as well as the experience of the parent and child with Head Start. Questions were asked about the employment, the income, the language spoken, and the recreational activities of the family.

Besides the in-house research planned, over 40 research and evaluation contracts were developed by the Head Start Research Division. These efforts were to be directed to special problems and/or special populations. For instance, the College of the Virgin Islands received a grant to do a sociological study of Head Start children from a public housing project on Saint Thomas. The Louisiana State University will make a comparative study of school achievement levels, through second grade, of Head Start children versus a group of children not culturally deprived. Another study is to focus on the impact of the program on bilingual pupils and families. The assessment of the Head Start impact upon the community is the purpose of the contract awarded to Antioch College in Yellow Springs, Ohio.

Beginning late in June and continuing through August, children from all across the nation made the daily trip to their Head Start classrooms. A program originally planned to serve some 100,000 children in fact served more than 560,000 from over 1,500 communities. Head Start Child Development Centers had a staff of 41,000 professionals, utilized and paid for the services of 46,000 neighborhood residents, and benefited from an impressive volunteer contribution. It is a tribute to the imagination, resourcefulness, skill, and hard work of thousands of people in local communities and in Washington that an effort of this magnitude could be put together in such a short period of time.

The remainder of this report deals in detail with the people and communities that were a part of Head Start, the programs that the local communities undertook to meet the goals of Head Start, and the impact of these programs on the participants--children, parents, staff, workers, and communities.

II. DESCRIPTION OF HEAD START COMMUNITIES AND PARTICIPANTS

A. Introduction

In this section of the report, the scope of the 1965 Project Head Start is discussed; the relevant characteristics of the communities, children, and parents served by Head Start are presented; and the staff and workers who served the other participants are described.

In looking at the scope of Head Start 1965, the discussion centers on (1) the geographic distribution of grants, (2) the distribution of grants according to county-population size, and (3) the extent of Head Start's concentration in the 300 lowest per capita income or special-target counties.

The description of communities (1) emphasizes economic and social characteristics identified by independent research studies, and (2) compares those special-target counties with Head Start programs to the special-target counties without programs. In the descriptions of the participating children, the focus is on (1) the child's social and medical history, (2) his Head Start medical and psychological examinations, and (3) comments on his activities and environment. Family information highlights parental economic and social history and activity.

A list of selected characteristics of staff members and workers and a discussion of Head Start teacher-motivation conclude the section.

There are a number of reasons for assembling data describing the various elements and participants of Head Start. The descriptions are necessary inputs for evaluations of scope and effectiveness of the program. In many cases they are helpful in indicating or defining program areas in which improvement or modification in planning and procedures are needed. Finally, the data are of great practical and theoretical interest. Indeed, one of the major accomplishments of Head Start was the collection of a rich store of information about an important sector of our nation.

B. Head Start Communities

1. Scope of Head Start

a. Geographic Distribution

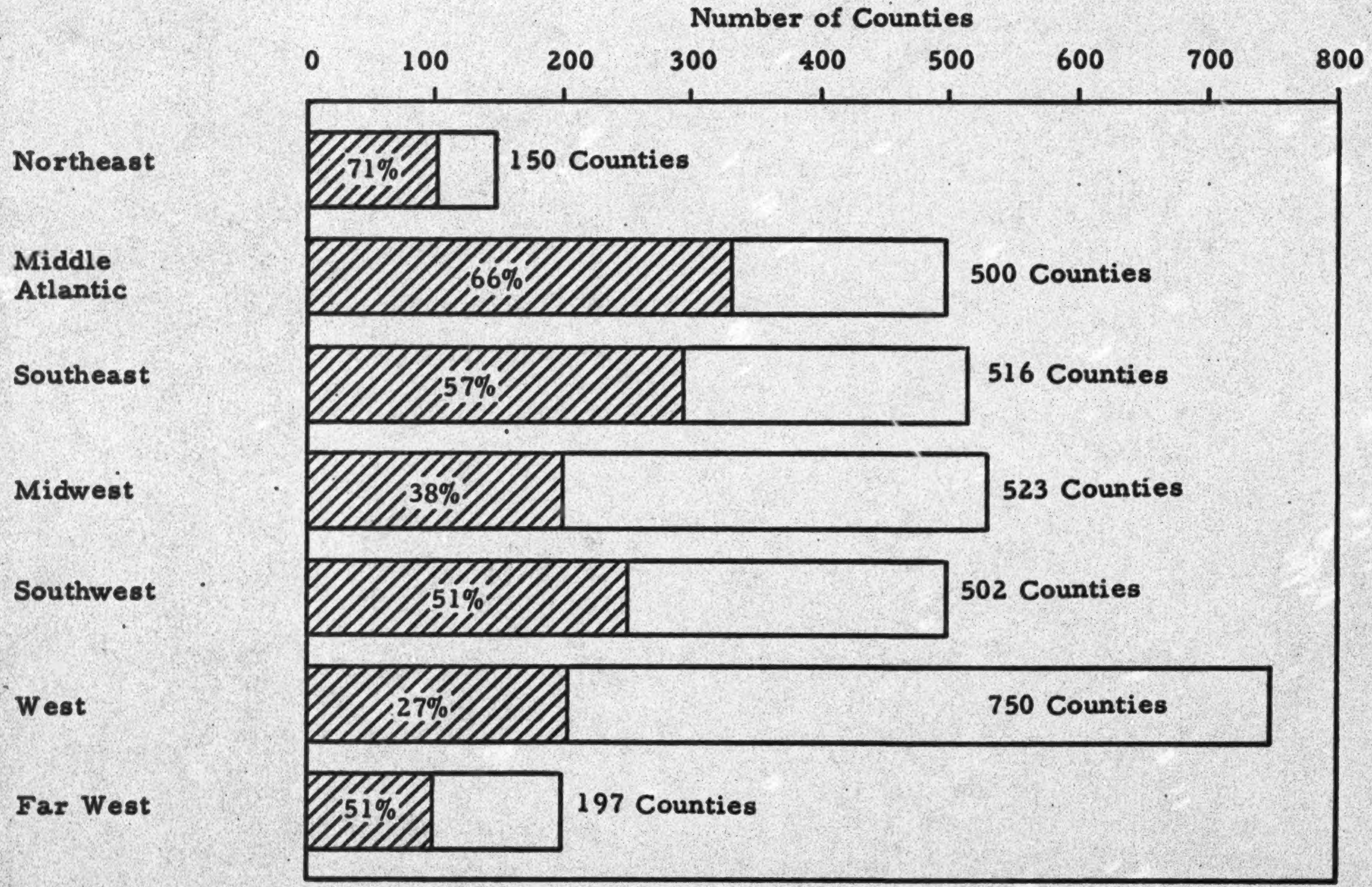
During the summer of 1965, 47 percent of the nation's 3,142 counties[1] were served by one or more Head Start programs. Exhibit II-1 shows the percentage of counties within each region served by one or more Head Start programs. Over 50 percent of the counties in five regions had at least one Head Start program in 1965. In the Northeast, with projects in more than 100 counties, only Maine had centers in fewer than 50 percent of its counties. Programs existed in the Middle Atlantic in 66 percent of the counties; Virginia was the only state with less than 50 percent county participation. In the Southeast, all states had programs in at least 50 percent of their counties. In contrast, only 9 of the 29 states in the other regions (Midwest, Southwest, West, and Far West) had projects in over 50 percent of their counties. In general, then, Head Start had a broader geographical spread--i. e., more counties participated--in the eastern part of the United States.[2]

When compared with the population distribution in the country, the 1965 Head Start enrollment by region suggests that the program was most heavily concentrated in the three regions with the poorest populations: the Middle Atlantic, the Southeast, and the Southwest (see Exhibits II-2 and II-3). These three regions have 37 percent of the total population, but they accounted for 56 percent of the Head Start participants. The region with the highest median family income, the

---

[1] 3,072 counties and parishes; 62 county equivalents (mainly independent cities); 4 Alaskan judicial districts; and American Samoa, the Virgin Islands, Puerto Rico, and Guam were served. The 47 percent county participation was determined by an analysis of the listing of approved 1965 grants, which were organized by county. In a few cases, the grants were for multi-county programs. Where identifiable, each county in such programs is reflected in the 47 percent. It is possible that some multi-county programs were not identified and, therefore, that some counties are not recorded. It is believed, however, that this number is small.

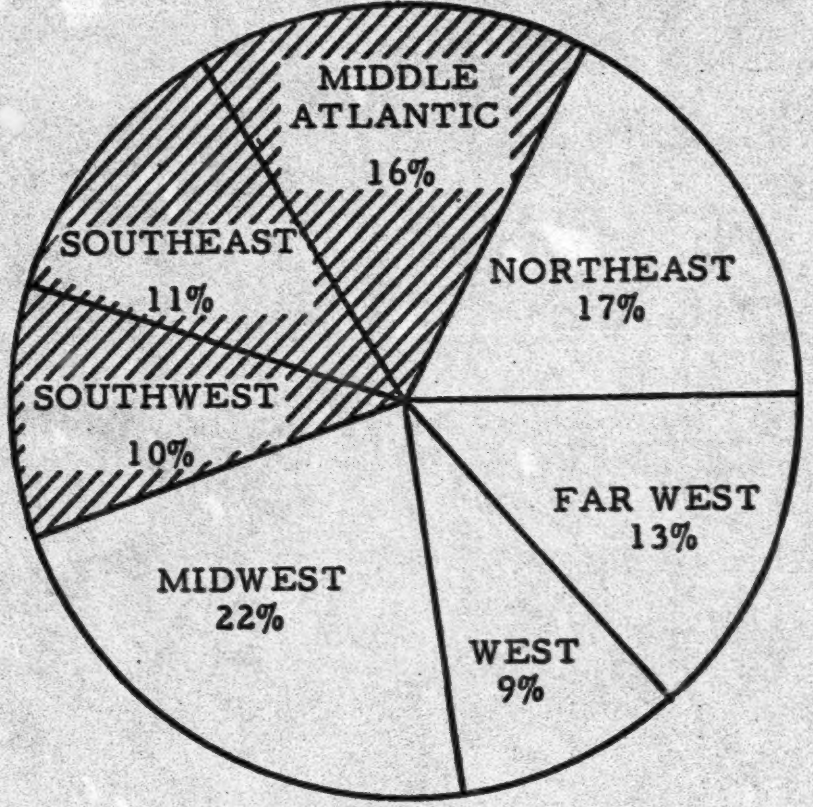
[2] A map of states by region appears in Section III, Exhibit III-1.



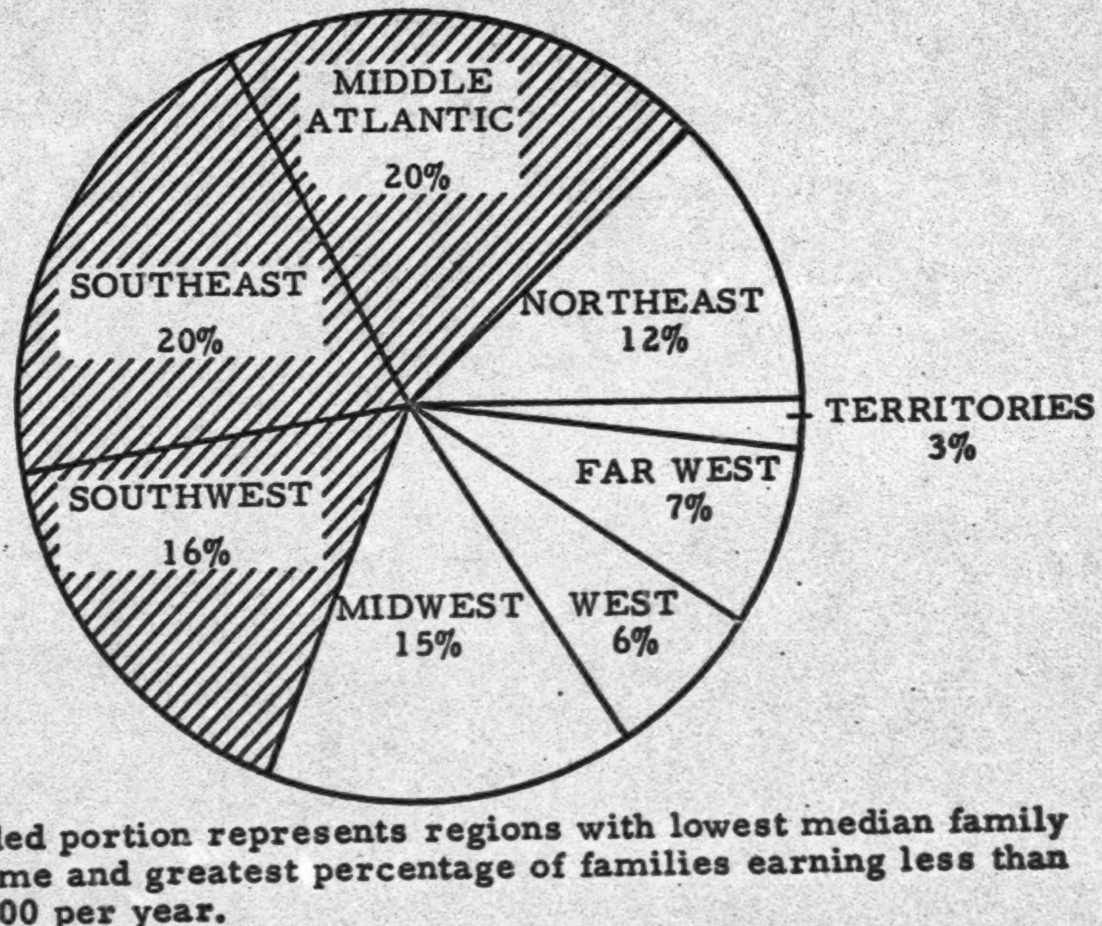
Note: Shaded portion is the percentage of counties with one or more 1965 Head Start Programs.

EXHIBIT II-1 COUNTIES SERVED BY HEAD START
(Percentage of Counties Served in Each
of the Seven Regions)

NATIONAL POPULATION, 1960 CENSUS: 179.3 MILLION



HEAD START 1965 POPULATION: 560,000



Note: Shaded portion represents regions with lowest median family income and greatest percentage of families earning less than $3,000 per year.

EXHIBIT II-2 REGIONAL DISTRIBUTION OF TOTAL AND HEAD START POPULATIONS

EXHIBIT II- 3 FAMILY INCOME BY REGION

	Median Family Income	Percentage - Family Income Under $3,000
Northeast	$6,372	13.3
Middle Atlantic	5,181	24.5
Southeast	4,078	36.8
Midwest	6,161	16.4
Southwest	4,589	31.9
West	5,226	23.8
Far West	6,517	15.1

Source: Bureau of the Census, County and City Data Book, 1962.

Far West, had the least Head Start enrollment concentration, namely, 13 percent of the total population, which represented only 7 percent of the 560,000 Head Start children. The Northeast and the Midwest have almost 40 percent of the total population and enrolled 27 percent of the Head Start children.

Although there was a Head Start enrollment concentration in the three regions with the lowest median family income, there was not a similar concentration in the West (Mountains and Plains states), where the economic characteristics are only slightly better than those in the Middle Atlantic. This region accounts for 9 percent of the total population and enrolled only 6 percent of the students--the fewest of any region. The largest program in the West was in Missouri, which has one-third of the population of the region and enrolled almost one-half of the Head Start participants.

The summer 1965 Head Start program, then, served a greater percentage of the nation's counties in the Northeast, the Middle Atlantic, and the Southeast. When related to population distribution, however, it appears that Head Start's concentration was greatest in the Middle Atlantic, the Southeast, and the Southwest. In each case, the region's share of the total Head Start population exceeded its portion of the national population.

b. Distribution of Head Start Children by County Size

Over 40 percent of the 1965 Head Start children lived in 123 counties with a population of over 250,000. Another 19 percent lived in over 950 counties of less than 25,000 inhabitants each. Most of the latter counties have large percentages of rural populations. Exhibit II-4 shows the distribution of the Head Start children by region within 10 county-population groupings.

Eighty-five percent of the Head Start children in the Northeast, 69 percent in the Far West, and 67 percent in the Midwest live in counties with populations of more than 250,000 persons. Thirty-two percent of the participants in the Southeast, 30 percent in the West, 27 percent in the Middle Atlantic, and 22 percent in the Southwest live in counties with less than 25,000 inhabitants.

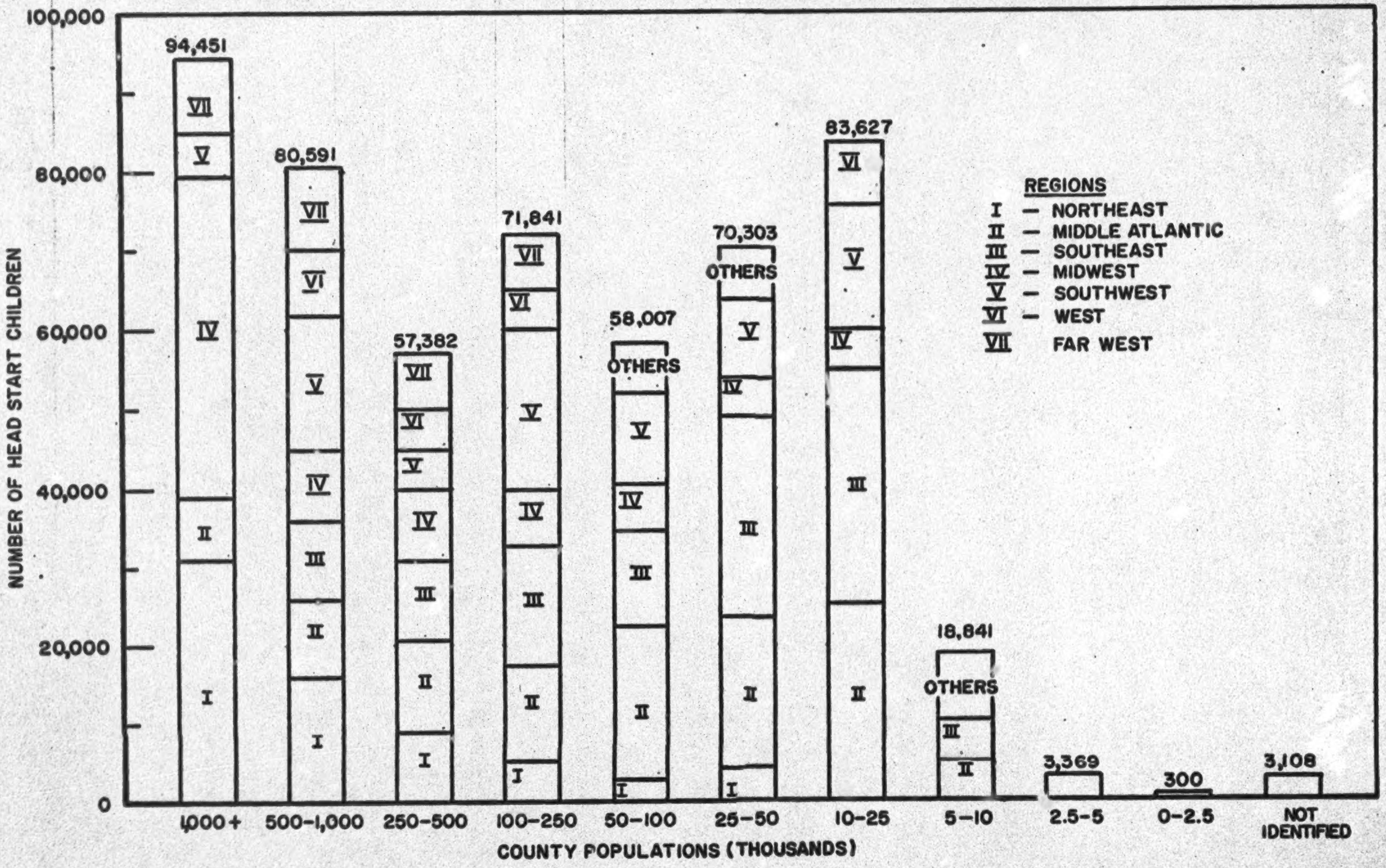


EXHIBIT II-4 URBAN-RURAL DISTRIBUTION OF HEAD START CHILDREN

c. Special-Target Counties

As mentioned above, Head Start participation was more concentrated in the nation's three regions with the lowest median family income. Ninety-five percent of the 300 special-target counties[1] are contained in the Middle Atlantic, Southeast, and Southwest. An equal percentage of the 182 counties with a per capita income of less than $750 per year are located in these regions.[2]

Three questions arise with respect to Head Start programs in these counties:

- To what extent did Head Start programs serve them?
- Did Head Start have a greater concentration in the special-target counties than elsewhere?
- Did Head Start reach the poorest children within these counties?

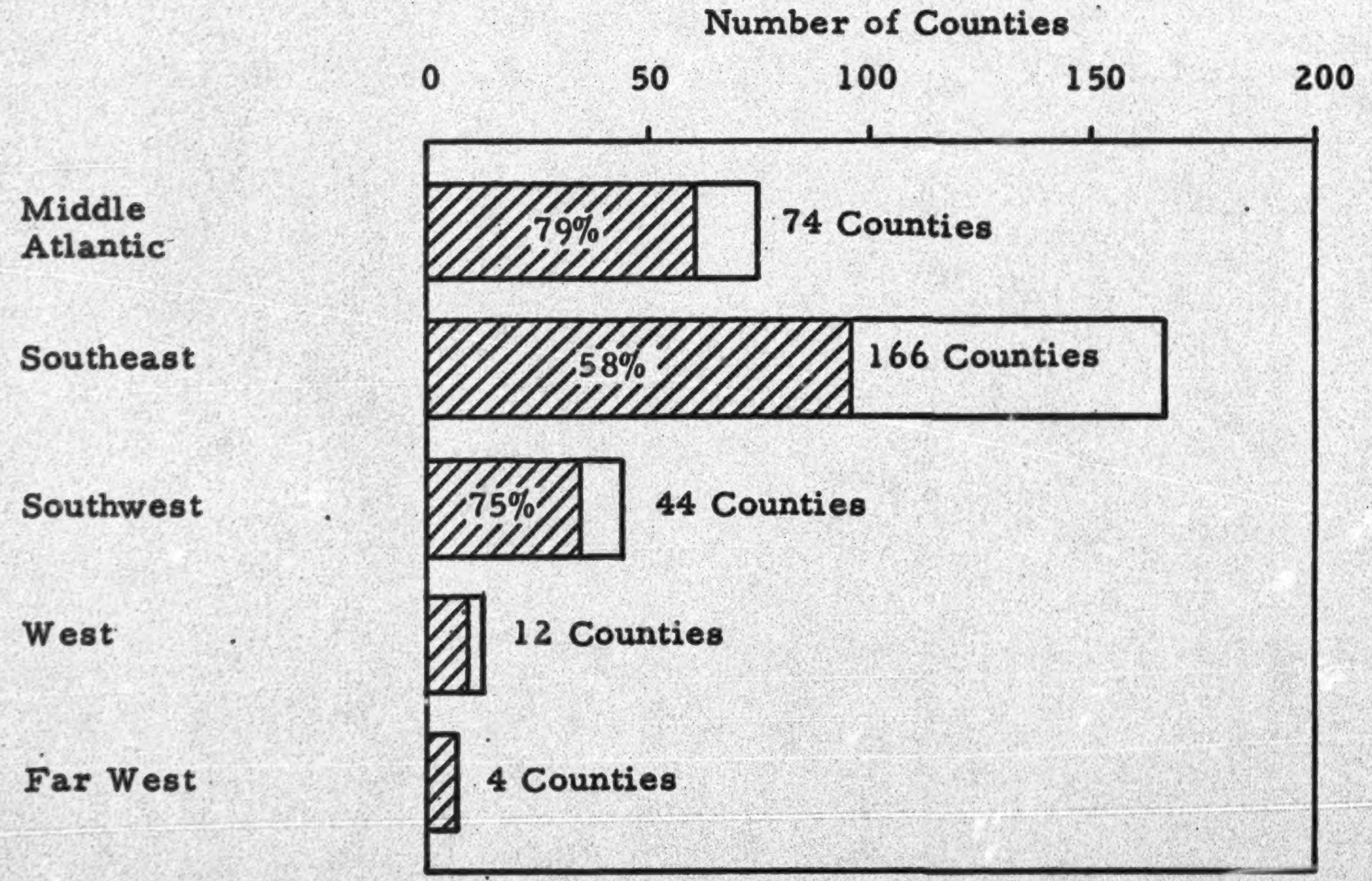
In 1965, Head Start programs appeared in 67 percent of the special-target counties. These 201 counties represent 13 percent of all counties served by Head Start. As indicated in Exhibit II-5, more of the nation's special-target counties are located in the Southeast than in any other region, accounting for 55 percent of the 300. The 1965 Head Start program entered 58 percent of these. Both the Middle Atlantic and Southwest, which have proportionately fewer of these counties, had a greater percentage with programs: 79 percent of the Middle Atlantic counties and 75 percent of those in the Southwest participated.

When compared with the population of the special-target counties, Head Start enrollment appears to have been concentrated more heavily in these counties than in other communities. The 284 special-target counties in the Middle Atlantic, the Southeast, and the Southwest, for example, account for 6.5 percent of their total regional populations; the children in these counties served by Head Start were 15 percent of the total enrollment of the regions. The greatest Head Start assault on

---

[1] As indicated in Section I, the 300 counties in the United States with the lowest per capita income.

[2] So identified because in Community Action Programs the Federal grant may exceed 90 percent.



Note: Shaded portion is the percentage of counties with one or more 1965 Head Start Programs.

EXHIBIT II-5 SPECIAL-TARGET COUNTIES SERVED BY HEAD START
(Percentage of Counties Served in Each of 5 Regions)

special-target counties was in the Middle Atlantic region. The 74 poor counties account for 4 percent of the total population, and Head Start participation in 59 of these counties was 14 percent of the regional total. Kentucky led the way: 31 of the 34 counties in this group had programs for almost 9,000 children, representing 36 percent of the state's total Head Start enrollment. The population of these 34 counties is 17 percent of the state total.

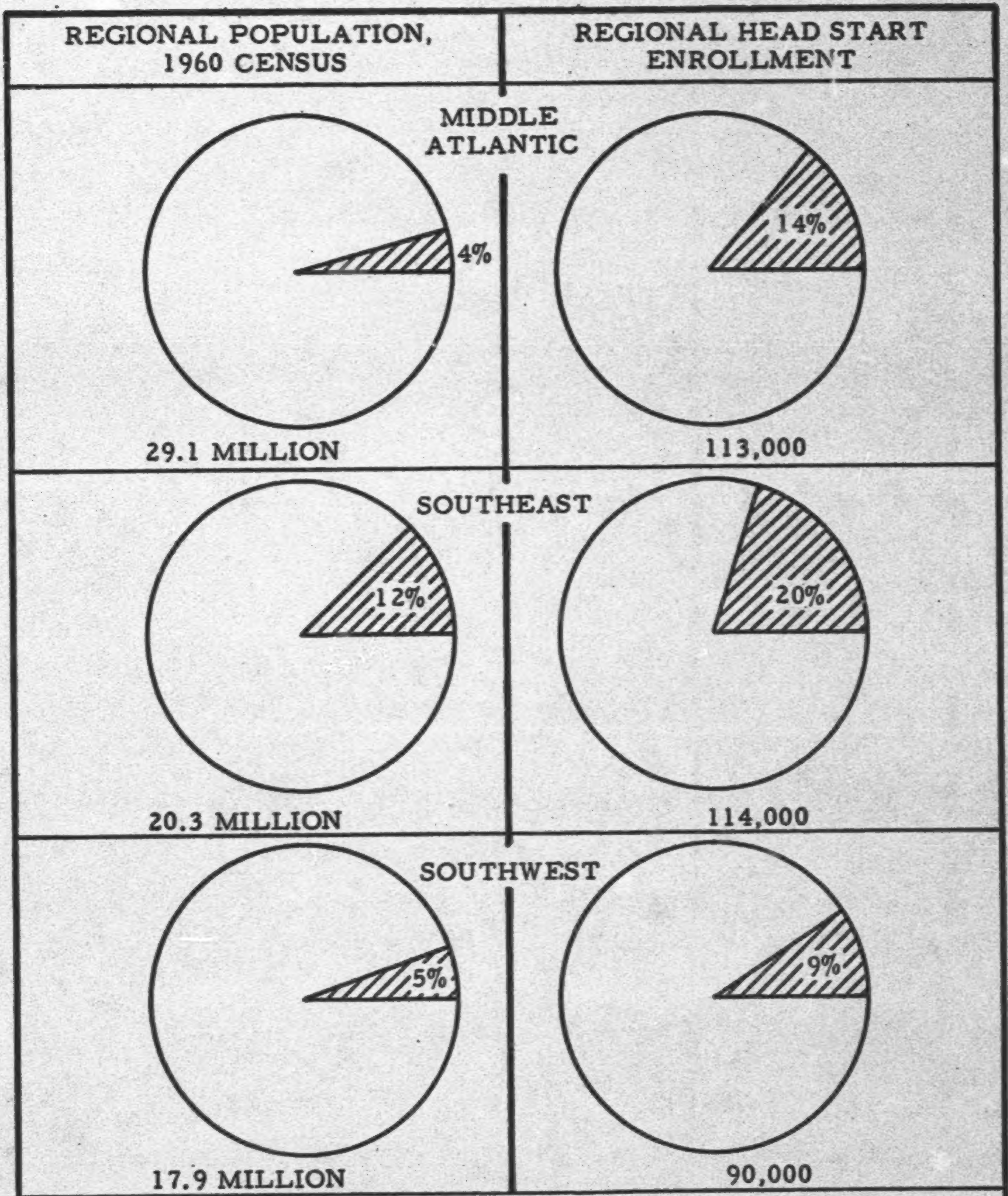
Ninety-six special-target counties in the Southeast enrolled 20 percent of the Head Start children in that region. The 1966 special-target counties of the region contain 12 percent of the population. Concentration was greatest in Georgia and Tennessee. (See Exhibit II-6 for these comparisons.)

The most difficult question to answer is whether the 1965 Head Start effort reached the most economically and culturally deprived children within these counties. Although no survey of all or a sample of these counties was directed to this question, two independent research studies of relatively small programs discuss the extent to which Head Start reached the target group in a specific area. Alfonso Ortiz examined Project Head Start in an Indian Community, San Juan Pueblo in New Mexico. Seven Indian children participated in this program, which was sponsored by the San Juan Public School. On September 1, 1965, there were 71 Indian children between the ages of 4 and 6 in San Juan, 52 of whom came from economically deprived families. Only five of the seven Indian children attending were from these economically deprived families. Ortiz concludes that "...Head Start did not serve San Juan to any significant degree in 1965" (Reference 80).

Knox County, Kentucky, with a population of 25,000, has a per capita income of $612 per year.[1] Head Start enrolled 452 children from this county in 1965. Psychological Associates, in An Evaluation of the Knox County, Kentucky, Project Head Start, indicates that approximately 450 deprived children were eligible for this program. The extent of deprivation is not defined. Although the report did not state that the

---

[1] The U.S. per capita income in 1963 was $2,449.



Note: Only the Middle Atlantic, the Southeast, and the Southwest are shown here. As indicated in Exhibit II-5, there are few Special-Target Counties in the West and Far West.

Shaded portion: Special-Target Counties

EXHIBIT II-6 CONCENTRATION OF HEAD START CHILDREN IN SPECIAL-TARGET COUNTIES

452 enrolled were all deprived children, it is presumed that the target group in Knox County did participate (Reference 4).

As was discussed in Section I, OEO emphasized the inclusion of the 300 special-target counties in Head Start. This effort was rewarded with programs initiated in over two-thirds of the counties for almost 50,000 children. While all of the eligible children did not have the opportunity to participate, the percentage of economically deprived families in the special-target counties is so great that it must be presumed that most of the children fulfilled the economic criteria for participation.[1]

2. Characteristics of Head Start Communities

Except for the 300 special-target counties mentioned above, the emphasis on participation in the summer program was placed on economically deprived children and families, rather than on particularly depressed communities. Therefore, any measure of Head Start success in reaching its target population must be based upon the characteristics of the participating children and families, rather than upon descriptions of the communities.[2]

The Head Start program has stressed that the income level of the family is only one factor in determining an individual child's need for the Head Start experience. Family characteristics which might contribute to the need include ethnic background, household size, extent and type of employment for either or both parents, the number of parents (one or two) in the family, and the educational level of the parents. It is evident from its emphasis on the special-target counties that OEO also believes that the community environment may substantially affect the child's need for this experience. For example, the child of a poverty-level family living in a relatively prosperous community may have more opportunity for a variety of experiences than does the child of a "slightly-above" poverty-level family living in a depressed area. This, of course, is but one example and interpretation, but it does serve to illustrate the importance of describing the community as a potential factor for influencing the child.

---

[1] Economic criteria are defined in Section I, page I-9.

[2] The extent to which Head Start reached this target population is discussed in subsection II. C. 1.

Descriptions of the communities served by the 1965 program, then, may be very valuable in providing a framework for understanding the characteristics of and the program impact on the various participants, and in suggesting types of information on communities which may be helpful in evaluating applications and programs.

This subsection will focus on two areas: (1) a presentation of descriptive economic and social data from selected communities served by Head Start,[1] and (2) a comparison of special-target counties served by Head Start with those special-target counties without programs.

Seven independent research studies provide descriptions of communities served by Head Start programs. Four of these communities are in the Northeast, with a sample of Head Start communities in Massachusetts; Northfield, Vermont; Rochester, New York; and Syracuse, New York. One community is in the Midwest (Greene County, Ohio); one in the West (Denver, Colorado); and one in the Southwest (San Juan Pueblo, New Mexico). (See References 25, 99, 16, 113, 21, 88, and 80.) As will be seen, these independent studies emphasize those demographic characteristics which will tend to indicate the economic and social conditions of the Head Start communities.

In Massachusetts, some 30 of 120 communities with 1965 Head Start programs were sampled by Dr. Sarah T. Curwood. (See Reference 25.) From certain economic and social characteristics selected by Dr. Curwood, it would appear that the population of the 30 communities is somewhat poorer than the entire population of the counties in which they are located. From the information presented by Dr. Curwood, it is observed that in over 70 percent of the communities surveyed, there are proportionately more families with incomes of under $3,000 than in the counties as a whole. In over 80 percent of these communities, there are proportionately more individuals over 25 years of age with less than 5 years of schooling than in the counties as a whole. While there is no indication that these communities are representative of the 120 served by Head Start or that they are the poorest in the state, we can say that the 1965 Head Start effort did enter a number of communities which appear to have somewhat poorer populations than the total county populations.

---

[1] If the community is to be considered, then the boundaries of the community must be clearly defined. It will be noted later in this subsection that community will mean county, city, town, ward, or neighborhood, depending on the independent study reviewed. In most cases, the economic and social characteristics of a county or city are not sensitive enough to the conditions of the neighborhood in which the child lives. It will also be noted that the community characteristics highlighted vary from study to study, depending upon the data presented.

Forty-eight children in Northfield, Vermont, were served by Head Start in 1965. (See Reference 99.) Northfield, with a population of 4,500, has a higher percentage of families with incomes of under $3,000 than does Washington County, in which it is located.

Rochester, New York, had a program for 675 children. As reported by the Social Services Department of the Rochester Area Council of Churches, the city and its suburbs are relatively prosperous, with a substantial growth rate. However, it is stressed that, as in so many cities, there is a "...'community within the community' of people who have not been assimilated into the Rochester economy..." (Reference 16).

From 1950 to 1960, the city of Rochester's population decreased slightly. The white population specifically decreased, while the nonwhite population showed a threefold increase. Population projections through 1980 indicate that this trend will continue. This nonwhite population is primarily centered in two city wards, where Head Start was concentrated. In one ward, there was a high percentage of children under 18 years of age, and while in the other section the percentage was low, it was increasing rapidly. The level of average income in both areas was low. In 1960 the median family income for the total Rochester population was $6,361; for the nonwhite population it was $2,000 less. The unemployment rate in the areas of poverty is 26.1 percent, as compared with Rochester's rate of 1.5 to 2.9 percent. The two wards had a high ratio of renter-occupied units, high vacancy rates, and a high degree of deterioration and dilapidation. The nonwhite population also had a very high density rate (persons per household) as compared with the white population.

The schools in these areas are heavily nonwhite. The authors state that: "Performances of schools located nearest the areas of poverty suggest that, while teaching staffs may be of adequate quality, insufficient encouragement is given to students to achieve marks sufficient for college entrance."

It is the conclusion of the authors that the 1964 riots were based on economic factors: "...the obvious affluence of the general community in sharp contrast to the 'ghettos'." It is also indicated that the voters in the areas of poverty are emerging as a more potent force. To meet these problems the city government has initiated programs in education, recreation, employment training, housing, and urban development. The Rochester study suggests that these programs were indirect and that the new programs of the poverty agency, Action for a Better Community, are more direct. The main emphasis of its programs was on education and youth. Interestingly enough, the program received a mixed response from the community, with the critics suggesting that the present programs had not reached the truly poor.

Dunbar Association, a Community Chest neighborhood center in Syracuse, New York, sponsored a Head Start program for the neighborhood served. Many families served by the center have been relocated as a result of urban renewal. The previous neighborhood had high delinquency rates and low annual family incomes. Thirty percent of the center members were 1-parent families; approximately one-third received public assistance. The majority of employed fathers and mothers were unskilled or semi-skilled (Reference 113).

In Denver, Colorado, where over 2,100 children participated, the census tracts covered by the centers included those with: (1) the highest population density; (2) the highest number of Spanish surnamed people; (3) the lowest median income; (4) the highest concentration of nonwhite population; (5) the highest concentration of unemployed males; and

(6) the largest number of general welfare and Aid to Dependent Children recipients. (See Reference 88.)

Greene County, Ohio, with programs for 315 children, is relatively prosperous. The population growth for 1950 to 1960 was 60.7 percent, and by 1975 it is expected to grow another 57 percent. The county is first in the state in median income ($6,520) and educational level of the population (median school years completed: 12.1). However, 30 percent of the males over 25 years of age have completed 8 or less years of education. Eleven percent of the county's families earn less than $3,000 per year, and 1,786 families have incomes under $2,000. In Greene County, then, there are pockets of poverty.[1] (See Reference 21.)

San Juan Pueblo, New Mexico, is an economically deprived community. Of all the Pueblos in New Mexico, it has the lowest per capita acreage (see Reference 80). Compared with the other 16 Pueblo Indian communities, it has the greatest percentage of off-reservation population. During the winter months, unemployment runs as high as 80 percent. One-half of the population is under 18 years of age. On October 1, 1965, 10 percent of the school-age children were not attending school. Although Ortiz states that the better educated and ambitious leave San Juan and that the poorly educated and less capable remain, he says that formal education is uniformly accepted as a desirable goal by the San Juan population. The people are concerned about the area's educational facilities, and the county's public schools are substandard. As indicated in the above discussion of the 300 special-target counties, Ortiz observed that the poor of San Juan were not served to any significant extent by the 1965 Head Start program.

The review of these seven studies suggests that, in four of them, the communities described contained a substantial number of economically deprived families. In the other three studies, the total populations appeared to be less poor, although there were economically and socially deprived families.

---

[1] Characteristics of families served by the Greene County Head Start program appear in subsection II. C. 1.

Because of the OEO effort to locate Head Start in the 300 special-target counties, information has been organized to permit a description and comparison of these counties--i. e., those served by Head Start versus those with no 1965 programs. This was an attempt to discover whether differences in selected economic and social characteristics provided any clue as to why 33 percent of the special-target counties did not affirmatively respond to the OEO effort. The characteristics were selected from the County and City Data Book (Bureau of the Census, 1962). Exhibit II-7 presents the comparisons.

From the characteristics compared, it appears that the 67 percent with Head Start programs had a slightly poorer population group than the 33 percent with no program. The weighted average of the median family income was 5 percent less in participating counties. There were proportionately more families with incomes under $3,000, and the unemployment rate was slightly higher in these counties. Finally, the percentage of housing units with complete plumbing facilities was less in the participating counties. It is to be emphasized, however, that these differences are small.

The population of the county does not appear to have contributed to its decision to have a Head Start program. Even one of the smallest counties, Buffalo County in South Dakota (population 1,500), had a sponsor and a program for 75 children. On the other hand, some of the largest of the special-target counties did not participate.

Urbanization did not affect the submission of a proposal. The non-participating counties in the Middle Atlantic, Southwest, and West do have greater rural farm populations, which are presumably more difficult to organize for projects such as Head Start. In the Southeast, however, where 55 percent of the target counties are situated, the participating counties have larger rural farm populations.

The most consistent and significant differences between the groups of counties are in the ethnic composition of the population. Thirty-five percent of the population of the participating counties is nonwhite; 47 percent of the population of counties without programs is nonwhite. The nonwhite percentage of all 300 counties is 39 percent.

EXHIBIT II-7 CHARACTERISTICS OF SPECIAL-TARGET COUNTIES[1]

	Number of Counties	Total Population	Average Population (mean)	County Population Range	Percent Urban	Percent Rural Farm	Percent Nonwhite	Median Income (weighted average)	Percent Families with Income Under $3,000	Percent Unemployed	Percentage Under Age 5	Percent Houses with all Plumbing
National												
Head Start	201	3,208,098	15,961	1,547-89,102	13.2	34.1	34.5	2,113	64.8	6.2	12.2	30.4
Non-Head Start	99	1,282,432	13,963	1,513-81,493	13.5	35.2	46.7	2,215	62.2	5.6	12.4	32.1
Middle Atlantic												
Head Start	59	1,131,177	19,172	4,520-89,102	7.3	31.5	16.2	2,193	62.6	7.5	11.4	29.8
Non-Head Start	15	106,776	7,118	3,221-20,278	6.3	41.9	42.3	2,290	60.8	5.5	12.5	33.6
Southeast												
Head Start	96	1,525,972	15,896	3,247-54,464	14.8	38.3	46.8	2,050	66.6	5.2	12.4	30.4
Non-Head Start	70	949,432	13,563	3,576-41,989	13.6	34.0	49.4	2,180	62.9	5.4	12.4	30.5
Southwest												
Head Start	33	444,518	13,470	4,393-37,606	22.8	25.4	28.0	2,088	64.8	7.0	12.2	32.2
Non-Head Start	11	215,378	19,231	6,319-81,493	21.8	30.8	43.1	2,257	61.2	6.5	13.0	35.9
West												
Head Start	9	63,768	7,085	1,547-31,350	8.6	41.4	26.1	2,290	61.2	5.9	13.2	31.0
Non-Head Start	3	10,846	3,615	1,513- 4,749	-	64.1	7.4	2,474	58.6	8.1	12.3	45.3
Far West												
Head Start	4	42,663	10,665	3,128-30,438	-	13.7	81.6	2,562	56.5	15.4	18.8	24.1
Non-Head Start	-	-	-	-	-	-	-	-	-	-	-	-

Note: (1) All statistics are based on 1960 census data. Percentages may have changed.

The Middle Atlantic area, principally Virginia, shows the greatest difference between the two groups of counties being compared. In Virginia the nonwhite population accounts for over 40 percent of the counties and county-equivalents without programs, and only 20 percent of the participating counties.

Although between special-target counties with Head Start programs and those without programs there were apparent differences in the ethnic composition of the population, it should be emphasized that it cannot be concluded from this comparison that certain ethnic groups within these counties were served to the exclusion of others.[1]

3. Summary

The summer 1965 Project Head Start entered 50 states, the District of Columbia, and 4 territorial possessions. Forty-seven percent of the counties in the nation were served. Over one-half of the counties in four of the seven regions (Northeast, Middle Atlantic, Southeast, and Southwest) had at least one Head Start grant. When compared with the population distribution of the United States, Head Start appears to have been most concentrated in the three regions (Middle Atlantic, Southeast, and Southwest) with the most special-target counties. While the majority of children came from predominantly urban counties, a significant number came from small counties with largely rural populations.

With OEO's special encouragement and assistance to the country's 300 lowest per capita income counties in initiating Head Start programs, it is noteworthy that two-thirds of these counties had one or more programs. When related to the population size of these counties, their programs appear to have served a greater proportion of the children than did programs in counties elsewhere in the nation.

Independent research studies on selected communities served by Head Start reveal that the researched areas with programs tended to have poorer populations (in terms of family income) than state or national averages. When the special-target counties were examined to determine whether there were any differences in the population characteristics between counties with and those without programs, it was found that participating counties tended to have slightly poorer populations, but the most important difference was race.

---

[1] Available sources suggest that in every case the Head Start application included a signed civil rights compliance statement. It is not known whether other counties would have applied, had there been no compliance requirement.

The available information, then, indicates that Head Start programs appeared more frequently and with greater concentration in communities with somewhat poorer families than state or national averages. The extent to which Head Start reached these poorer families is discussed in succeeding subsections.

C. Head Start Children

1. General

The kinds of children Head Start was intended to serve have been observed and described by many educators and psychologists. Their findings have contributed to a rapidly growing body of knowledge about the so-called culturally deprived or socially disadvantaged child. There has been increasing study of various characteristics of children who, by virtue of poverty, prejudice, lingual background, or other constraining conditions appear to show a progressive deficit in socio-psychological development. Head Start was designed to find and help such children. In this subsection, we will therefore present descriptive data to aid in evaluating program effectiveness.

In order, however, to establish a framework for (1) the descriptive or characteristic data and (2) the data obtained on the impact of the program on the children (see Section IV), we will first present a brief summary of some of the observations of social and psychological characteristics of culturally disadvantaged children which have been reported in the professional literature.

The overview presented in Exhibit II-8 focuses on four areas of particular relevance to Head Start--motivation, cognitive functioning, social-emotional behavior, and language characteristics of young, culturally disadvantaged children. The exhibit is intended simply to highlight certain relevant observations made by each author cited, and is in no way intended to be exhaustive or to include all the relevant observations made by any of the investigators.

Exhibit II-8 shows that there is a general consistency of findings among observers. Of course, there are a great many individual variations from child to child, with some children exhibiting more or fewer (or different) characteristics than other children.

In summary, then, the culturally disadvantaged child has often been found to be characterized as follows:

EXHIBIT II-8 GENERAL CHARACTERISTICS OF CULTURAL DEPRIVATION

Source	Motivation	Cognitive Functioning	Social Emotional Development	Language Behavior
Hunt (Reference 60)	Fewer interests Inhibition of questioning (p. 89) Inappropriate intrinsic motivation	Perceptual deficiencies (p. 87) a. Recognize fewer objects and situations than most middle-class children b. Fewer interests; different interests c. Objects recognized differ from those recognized by middle-class children Inhibition of questioning (p. 89) Lack of opportunity to encounter a wide variety of objects, pictures (p. 89) Coded information stored in culturally deprived children differs from that in middle-class children (p. 90)	Locomotor and manipulative development must almost inevitably be sharply impaired (p. 89) Lack of appropriate behavioral models (p. 89) Lack of social approval for appropriate behavior (p. 89)	Linguistic liabilities (p. 87) a. Limited vocabularies b. Poor articulation c. Syntactical deficiencies--reliance on unusually short sentences, with faulty grammer
Guidelines for Testing Minority Group Children (Reference 45)	Less motivated toward scholastic and academic achievement (p. 132) Less competitive in the intellectual realm (p. 132)	Less exposed to intellectually stimulating materials in the home (p. 132) Less knowledgeable about the world outside his immediate neighborhood (p. 132) (May view testing as unpleasant, have primary objective of completing as rapidly as possible, escaping; shows more guessing, skipping and random responses (p. 133)) May learn rapidly, but not necessarily those lessons assigned (p. 136) May reason soundly, but not come to conclusions expected by the teacher (p. 136)	More fearful of strangers (p. 132) Less self-confident (p. 132) More "irritable" (p. 132) Less varied in recreational outlets (p. 132) Can influence others to work toward desirable or undesirable goals (p. 136)	Less verbal (p. 132) More apt to be bilingual (p. 132) Language form may be highly concrete, not abstract or symbolic (p. 142)
Bruner (References 11 and 12)		Less opportunity to develop adequate models and strategies for dealing with environment (Reference 12, p. 207) Diminished heterogeneity and reduced set of opportunities for manipulation and discrimination (Reference 12, p. 199)		Principal deficiency is linguistic in the broadest sense a. Lack of opportunity to share in dialogue b. Lack of opportunity to paraphrase c. Lack of opportunity to internalize speech as a vehicle to thought (Reference 11, p. 72)

EXHIBIT II-8 (Continued)

Source	Motivation	Cognitive Functioning	Social/Emotional Development	Language Behavior
Ausubel and Ausubel (Reference 3)	Likely to have ambivalent attitudes toward authority figures, to cope with them by exaggerated show of overt, implicit compliance, maintaining formally appropriate social distance, and interacting with authority figures in terms of formalized role attributes (p. 114)	Lower class children trained to respond to concrete, tangible, immediate; particularized properties of objects (p. 114); this [lack of emphasis on abstract, categorical, relational properties] affects verbal expression, memory, concept formulation, learning, and problem solving (p. 114)		
Deutsch (Reference 27)	Less expectation of reward for successful completion of task (p. 172)	Poor form discrimination and visual spatial organization (p. 170) Social conditions reduce range of experience	Less apt to have a good male model (p. 167) Scarcity of toys, utensils, etc. (p. 167, 170)	Poor auditory discrimination (p. 171) Spares syntactical organization (p. 175)
Improving English Skills of Culturally Different Youth (References 115, 98, 26, 116 and 36)	Preference for immediate pleasure rather than delayed pleasure (Smiley, p. 44) Negative attitude toward planning, rationality, and control of their environment (Smiley, p.45)	Attends substandard schools (including physical resources and teachers) (Smiley, p. 36)	Aggressive behavior, action-oriented, but not indiscriminate (Smiley, p. 43) "He gets his thrashings regularly and learns not to fear them" (Davis, p. 13) "Process of reciprocity...[of] assistance" (Smiley, p. 45) "Hostility" (Moore, p. 195)	"Poor in use of verbs" (Smiley, p. 39) "Tendency toward physical rather than verbal communication" (Smiley, p. 43) Three degrees of language handicap a. True verbal destitution b. Full but not standard language development c. Undeveloped, unconceptualized (Frazier, p. 70-72)
Reissman, (Reference 94)	Antagonism to school and teacher (p. 4-5)	Lack of education tradition in home (p. 4-5) Do better on performance tests of intelligence (p. 67) Use fingers when counting (p. 67) Move lips when reading (p. 67) Think in spatial rather than temporal terms (p. 67) Creativity often shown in non-academic ways (p. 59) Content-centered, not form centered (p. 73) Problem-centered, not abstract-centered (p. 73) Inductive, not deductive (p. 73) Oriented in spatial, not temporal terms (p. 73)	Poor health, improper diet, noisy home (p. 4-5) Like to draw (p. 67) Like role-playing (p. 67) Like sports (p. 67) Use physical forms of discipline (p. 67) Are physical and visual more than aural (p. 73) Less introspective (p. 73) Slow, careful, patient, rather than quick, clever, facile, flexible in important matters (p. 73) Enjoy fantasy (p. 76) Express self best in spontaneous, unstructured situation (p. 76)	Insufficient language and reading skills (p. 4-5) Poor with verbs, better with descriptive adjectives (p. 76) Understand more than can express (p. 76)

EXHIBIT II-8 (Continued)

Source	Motivation	Cognitive Functioning	Social/Emotional Development	Language Behavior
Gordon (Reference 40)	Use by parents of immediate punishment and reward (p. 378) Less affected by symbolic rewards and postponed gratification (p. 383) Drive not complementary with academic achievement (p. 383) Learn more quickly with material incentive (p. 384)	Lacking in books, artwork, toys, and self-instructional equipment (p. 377) Lack of systematic visual stimulation (p. 378) Difficulty in transition from concrete to abstract mode of thought (p. 379) Inferior in abstract conceptualization and categorization of visual stimuli (p. 379) Poor in visual imagery (p. 379) Inflexible in intellectual functioning (p. 379) Concepts are content-centered rather than form-centered (p. 380) Weak in conceptual and perceptual ability (p. 381) Skills better in physical behavior than visual, and better in visual than aural (p. 382)	Environment is noisy, disorganized, overcrowded, austere (p. 377) Crowded homes (p. 377) Overprotection of girls, inadequate discipline of boys (p. 378) Less family activity (p. 379) More behaviorial disorders (p. 382) Low self-esteem (p. 383) Impaired patterns of personal-social organization (p. 383) More behaviorial disturbance (p. 383) Distorted interpersonnel relationships (p. 383) Self-depreciation (p. 383) Fearful and passive (p. 383)	Home environment less verbal (p. 378) Weaknesses in the utilization of normative abstract symbols to represent feelings and experience (p. 379) Use of language as a cognitive tool is deficient (p. 380)
Grotberg (Reference 44)		Less able to develop strategies for evaluating information (p. 418)		Vocabulary differences; culturally disadvantaged use less "standard" words than non-deprived (p. 418)
Hines (Reference 56)		Parents do not provide learning stimuli--books, magazines, etc.		
Edwards (Reference 32)		Inefficiency in reasoning and problem solving (p. 6) Poor (short) attention span (p. 7) Neither language nor concepts of quantitative thinking are familiar (p. 8) Was rudimentary concepts in quantitative, spatial, temporal aspects (p. 8, 9)	Restricted physical environment (p. 2) Small geographical area (p. 3) Spatially confined and deficient concepts (p. 8) Passive/indifferent attitude toward inquiry (p. 10) Poor sense of personal worth (p. 10) Low level of aspiration (sees self as a "nobody") (p. 10) Not much supervised social activity (p. 12) No clear notions of values and expectations of broader society (p. 12)	Poor auditory discrimination (p. 4) Restricted vocabulary (p. 4) Oral language often in a dialect (p. 4) Deficient in listening comprehension (p. 7) Poor visual discrimination (p. 9) Poor directional orientation for reading (p. 9)

a. Motivation

- Responsiveness to immediate and concrete reward and punishment
- Less responsiveness to symbolic and delayed gratification
- Less expectancy of any reward for successful task completion
- Less positive responsiveness to teacher and school environment
- Less likelihood of being a recipient of social approval

b. Cognitive Functioning

- Little access to books or instructional materials
- More receptiveness to a physical mode of learning, less receptiveness to a visual mode, with aural mode being least likely to lead to the desired learning
- Poor form discrimination, visual-spatial organization, and visual imagery
- Inflexible intellectual functioning, with tendency to respond more to concrete than abstract concepts
- Primarily spatially oriented; poor temporal orientation

c. Social-Emotional Behavior

- Low level of self-esteem and self-confidence
- Fewer and less varied recreational outlets
- Fewer appropriate behavior models
- Unclear notions concerning values and expectations of broader society

d. Language Characteristics

- Little and poor opportunity at home for development of language and speech
- Poor articulation; limited and non-standard vocabulary; short sentences; few verbs; and faulty syntax and grammar

- Poorly developed auditory discrimination ability
- Language that is concrete rather than abstract or symbolic, and that is at variance with even regional standard English

2. Background

Selected social, cultural, and economic characteristics of Head Start children are presented in this subsection in order to determine the extent to which the specific target group (children from economically and socially deprived families) was reached. The characteristics selected are age, sex, race, cultural background, size of household, family income, family intactness, mother's education, and mother's employment status.[1] The descriptions are from the 1-percent nationwide sample[2] of Head Start children and from the children examined in a number of independent research studies.[3]

Fifty-five percent of the participating children were 4 and 5 years old (as shown in Exhibit II-9). An estimated average age for the sample is 5 years, 10 months. Inspection of the special studies indicates an age range and distribution comparable to that shown in the 1-percent sample. One important factor affecting age for any given center was whether or not the community had a public kindergarten. Head Start communities without public kindergartens tended to enroll older children than did those with public kindergartens. In addition, Head Start children tended to be older than middle-class children enrolled in private preschool facilities. For example, in a study by Horowitz and Rosenfeld (Reference 59) comparing Head Start children and University of Kansas Nursery School children, the difference in mean age between the Head Start children and the University nursery school children was 1 full year (5 years and 2 months for the Head Start children, and 4 years and 2 months for the

---

[1] The selection of characteristics was suggested by the Director of Research and Evaluation, Project Head Start.

[2] See subsection II. F for a discussion of the sample. Tables are adapted from those in Reference 89, or from a report prepared by the OEO Information Center.

[3] Some of the studies, called "special studies," were funded by OEO, while others, called "local studies," were undertaken with other funding by universities, institutes, and local agencies.

EXHIBIT II-9 AGE(1)

	Percent
3 years, 11 months and under	0.7
4 years to 4 years, 11 months	13.1
5 years to 5 years, 11 months	41.5
6 years and over	38.5
Not available	6.2
Total	100.0

EXHIBIT II-10 SEX(1)

	Percent
Male	49.5
Female	46.4
Not reported	4.1
Total	100.0

Note: (1) N = 5036. From Reference 89.

University nursery school children). In a study involving 178 Head Start children in Oklahoma (Mildred O. Jacobs and James K. Shafer, University of Oklahoma, Reference 62), about 60 percent of the children were 6 years or older. In Massachusetts, where 8,444 children took part in Head Start, about 90 percent were 5 years or older. From available data sources, it appears that the bulk of Head Start children were 5 and 6 years of age.

According to the information obtained from a 1-percent sample of Head Start children (see Exhibit II-10) there was a slightly higher percentage of boys than girls in the programs. There is little information in the independent studies which speaks directly to the sex distribution of the children examined. The Jacobs and Shafer study of Cleveland County's (Oklahoma) 178 Head Start children is one example of a program where a slightly larger percent of boys than girls (52 percent boys) attended (Reference 62). It should be noted that several institutions and states[1] are in the process of establishing data bases, so it will be possible at a later time to compare sections of the country with national samples.

The 1-percent sample data shown in Exhibit II-11 suggest that there was a fairly equal number of white and Negro children in Head Start. Since descriptive data on race for nearly 16 percent of the sample were not reported, it is not possible to make firm or conclusive statements about the distribution of the Summer 1965 Head Starters by race. While special studies indicate that often there was not an even distribution of Negro and Caucasian children within classes, it is difficult to obtain complete data, since information is often given only for children specially selected for inclusion in a study.

Information available from the 1-percent sample on distribution of Head Start children by cultural background is shown in Exhibit II-12. About 16 percent of the children came from the two cultural subgroups specified (Puerto Rican and Mexican-American) with equal percentages (about 8 percent) from each.

---

[1] West Virginia, Iowa, and Urban Child Center (University of Chicago, Illinois).

EXHIBIT II-11 RACE(1)

		Percent
White		42.8
Negro		40.6
Asian		0.3
Eskimo		-
American Indian		0.5
Unknown		1.4
Not reported		14.4
	Total	100.0

EXHIBIT II-12 CULTURAL BACKGROUND(1)

		Percent
Puerto Rican		8.0
Mexican-American		7.8
Other		20.4
Unknown		63.8
	Total	100.0

Note: (1) N = 5036. From Reference 89.

Exhibit II-13 indicates that at least 58 percent of the Head Start children came from households of six or more people. The Bureau of the Census estimates that, in 1963, only 14 percent of the nation's families had six or more persons (Reference 79). Cohnstaedt's study of 424 Head Start children (representing 334 families) from Greene County, Ohio, reported that the average number of children in a Greene County Head Start family was 3.2 (Reference 21). A study of the San Diego program indicated that the majority of Head Start families included 1 to 5 children, while fully 30 percent included 6 to 10 children in the home (Reference 10). When compared with Census data, then, it appears that Head Start children tend to come from larger households than national averages.

Data from the 1-percent sample shown in Exhibit II-14, indicates that at least 36 percent of the Head Start families had annual incomes above $3,000 and that at least 38 percent had annual incomes below $3,000. The large percentage (25.7 percent) of unknown (unreported) incomes makes it impossible to obtain a true picture of the income level and range of Head Start parents. Even if that limitation were eliminated, however, data on reported family income are often suspect. Typically, it is difficult to obtain reliable family income information without some independent assessment or checking procedure.

Several of the independent studies provide data on the level of family income. Cohnstaedt's study of Greene County, Ohio, reported a median income range of $3,000 to $3,999, and/or a mean income of $3,700. Seventy percent of the Head Start families had incomes below $3,000, as compared with 38 percent in the national sample. In San Diego, 50 percent of the Head Start families had annual incomes of less than $3,000 and 90 percent had incomes below $5,000. In Northfield, Vermont (described by the investigator as a "typical Vermont town"), where incomes of all 43 Head Start families (representing 48 children) were obtained from tax records, only 7 percent of the Head Start families had annual incomes below $3,000; 32 percent had incomes in the $3,000 to $4,000 range; about 20 percent had incomes in the $4,000 to $5,000 range; and 42 percent had annual incomes above $5,000 (Reference 99).

EXHIBIT II-13 SIZE OF HOUSEHOLD(1)

		Percent
2		.8
3		4.8
4		12.5
5		17.3
6		16.3
7		13.5
8		9.6
9		6.6
10 or more		12.2
Unknown		6.4
	Total	100.0

Note: (1) N = 5036. From Reference 89.

In Massachusetts, Curwood pointed out that it was the consensus at the Head Start teachers' reunion in September 1965 that too few of the "hardcore poor" benefited. Most of the families were those with several children and were "slightly up" the economic scale (Reference 25).

As has been noted in Section I, one of the original goals of Head Start was to draw 85 percent of its children from families with incomes of $3,000 or less. The available information suggests that this goal was not met. Further analysis of the problem is given in Appendix D.

Additional information on statewide bases will become available when the several Head Start data banks (such as Iowa and West Virginia) have processed their information.

Exhibit II-15 indicates that a high percentage (68.5 percent) of Head Start children came from 2-parent homes. There was little supplementary information from available sources concerning "presence of parents," but Cohnstaedt's special study on Greene County, Ohio, involving 424 children reported that 78 percent of Head Start households were headed by fathers (Reference 21).

Exhibit II-16 indicates that at least 60 percent of the mothers of Head Start children did not complete high school, while about 20 percent were high school graduates. Two independent studies also report statistics concerning the level of Head Start mothers' education. Of the 334 Head Start families studied by Cohnstaedt in Greene County, Ohio, 24 percent of the mothers were high school graduates. The San Diego statistics indicate that in 14 of the 18 centers (serving 544 children), more than 50 percent of the mothers had not completed high school. (In only 9 centers had more than 50 percent of fathers not completed high school.)

Exhibit II-17 shows that at least the majority (54.8 percent) of Head Start mothers were not employed outside the home. This finding is consistent with the high incidence of 2-parent families, where the father might be likely to be the sole breadwinner, especially since the mothers would be needed to care for the several children in the home.

Certain background characteristics of the children, the majority of which were introduced above, are related to each other in 15 2-factor descriptions (Exhibits II-18 through II-24). Two-factor descriptions

EXHIBIT II-14 FAMILY INCOME(1)

	Percent
Less than $1,000	9.0
$1,000 to $1,999	11.9
$2,000 to $2,999	17.2
$3,000 to $3,999	13.0
$4,000 to $4,999	9.2
$5,000 to $5,999	6.8
$6,000 to $7,999	4.9
$8,000 to $9,999	1.5
$10,000 or more	0.8
Don't know	15.3
Not reported	10.4
Total	100.0

EXHIBIT II-15 WITH WHOM CHILD LIVES(1)

	Percent
Mother and father	68.5
Mother	16.6
Father	0.8
Other	5.3
Unknown	8.8
Total	100.0

Note: (1) N = 5036. From Reference 89.

EXHIBIT II-16 MOTHER'S EDUCATION

Highest Grade Completed	Percent[1]
0	1.7
1 - 6	12.3
7 - 8	16.8
9-11	29.7
High school graduate	20.5
College	5.4
Unknown	13.6
Total	100.0

EXHIBIT II-17 DOES MOTHER WORK?

	Percent[1]
Yes	28.3
No	54.8
Not sure	1.8
Unknown	15.1
Total	100.0

Note: (1) N = 5036. From Reference 89.

EXHIBIT II-18 CHILD'S RACE(1)

		White	Negro	Other	Unknown
A.	By Child's Age				
	Under 3 yrs., 7 mos.	.4	.4	.0	.2
	3 yrs., 7 mos. to 4 yrs., 6 mos.	1.3	1.4	.1	.5
	4 yrs., 7 mos. to 5 yrs., 6 mos.	10.1	13.0	.6	5.3
	5 yrs., 7 mos. to 6 yrs., 6 mos.	22.9	23.6	.8	5.0
	Over 6 yrs., 6 mos.	5.4	2.8	.1	.9
	Unknown	.7	.8	.0	3.7
B.	By Child's Sex				
	Male	21.5	20.7	.7	6.3
	Female	18.7	20.7	.9	5.6
	Unknown	.6	.6	.0	3.7
C.	By Mother's Employment Status				
	Mother works	8.1	16.8	.2	3.2
	Mother does not work	26.8	18.2	.9	8.3
	Unknown	6.0	7.0	.4	4.1
D.	By Level of Mother's Education				
	None	.7	.3	.1	.4
	1 to 6 years	6.0	3.5	.1	2.7
	7 to 8 years	7.8	6.4	.2	1.9
	9 to 11 years	11.6	17.0	.6	3.8
	High school graduate	8.9	8.9	.3	1.6
	Any college	.4	.8	.0	.2
	Unknown	5.5	5.0	.3	5.0

EXHIBIT II-18 (Continued)

E. By Number of Children in Household Under 16	White	Negro	Other	Unknown
1 to 2	13.0	10.3	.4	3.4
3 to 5	18.6	17.8	.6	6.4
6 to 8	5.7	9.2	.3	2.6
Over 8	1.0	1.8	.1	.8
Unknown	2.5	2.9	.2	2.4

Note: (1) N = 6309. Figures in each column of the tables are percentages of total sample.

EXHIBIT II-19 FAMILY INCOME(1)

		Under $3,000	$3,000 to $6,000	Over $6,000	Unknown
A.	By Child's Age				
	Under 3 yrs., 7 mos.	.3	.4	.0	.2
	3 yrs., 7 mos. to 4 yrs., 6 mos.	.8	.9	.1	1.4
	4 yrs., 7 mos. to 5 yrs., 6 mos.	7.5	10.4	2.7	8.4
	5 yrs., 7 mos. to 6 yrs., 6 mos.	22.7	14.2	3.2	12.3
	Over 6 yrs., 6 mos.	4.2	2.0	.4	2.7
	Unknown	1.4	1.2	.2	2.4
B.	By Child's Sex				
	Male	18.0	14.7	3.3	13.3
	Female	17.6	12.9	3.1	12.2
	Unknown	1.3	1.4	.3	1.9
C.	By Mother's Employment Status				
	Mother works	12.5	8.3	2.3	5.1
	Mother does not work	20.6	18.5	3.9	11.2
	Unknown	3.9	21.1	.5	11.1
D.	By Level of Mother's Education				
	None	.8	.2	.0	.4
	1 to 6 years	6.7	2.6	.2	2.8
	7 to 8 years	7.5	4.2	.5	4.2
	9 to 11 years	13.7	11.1	2.1	6.1
	High school graduate	5.7	8.0	3.0	3.1
	Any college	.2	.6	.5	.2
	Unknown	2.3	2.2	.4	10.7

EXHIBIT II-19 (Continued)

E. By Number of Children in Household Under 16

	Under $3,000	$3,000 to $6,000	Over $6,000	Unknown
1 to 2	9.8	8.4	2.7	6.2
3 to 5	16.9	14.3	3.1	9.2
6 to 8	8.5	4.9	.7	3.6
Over 8	1.6	1.2	.1	.8
Unknown	.3	.2	.0	7.5

Note: (1) N = 6309. Figures in each column of the table are percentages of the total sample.

EXHIBIT II-20 MOTHER WORKS OUTSIDE THE HOME BY FAMILY INCOME

Family Income (Annual)	Mother Works Outside the Home (%)(1)				
	Total	Yes	No	Not Sure	N/A
Less Than $1,000	9.0	11.7	8.3	6.5	6.8
$1,000 to $1,999	11.9	14.0	12.0	7.6	7.8
$2,000 to $2,999	17.2	18.9	18.1	15.2	10.9
$3,000 to $3,999	13.0	18.1	15.0	6.5	6.2
$4,000 to $4,999	9.2	7.6	11.2	3.3	5.5
$5,000 to $5,999	6.8	7.4	7.5	6.5	2.9
$6,000 to $7,999	4.9	5.2	5.8	0.0	1.8
$8,000 to $9,999	1.5	2.4	1.3	0.0	0.8
$10,000 or more	0.8	1.0	0.8	3.3	0.3
Don't know	15.3	14.0	15.7	34.8	13.7
N/A	10.4	4.7	4.2	16.3	43.3
Total	100.0	100.0	100.0	100.0	100.0

Note: (1) N = 5036. From Reference 89. Details are percentages of caption total.

EXHIBIT II-21 NUMBER OF PEOPLE IN HOUSEHOLD BY EDUCATION OF MOTHER[1]

Education of Mother	Number of People in Household (%)										
	Total	2	3	4	5	6	7	8	9	10+	N/A
Don't know	100.0	1.4	8.5	9.5	16.9	12.2	11.3	12.2	5.2	10.8	13.1
Some college	100.0	1.5	6.9	18.2	24.5	15.0	12.8	10.2	4.4	5.8	0.7
High school graduate	100.0	0.9	5.9	18.6	26.1	19.3	12.7	6.9	2.5	6.3	0.8
Grades 9-11	100.0	0.7	4.8	13.0	17.9	18.3	15.4	10.4	8.1	10.8	0.6
Grades 7-8	100.0	0.2	4.0	10.5	14.5	15.8	13.9	11.7	8.5	17.5	2.4
Grades 1-6	100.0	1.1	3.1	6.6	10.0	16.7	14.2	12.6	11.0	23.5	1.1
No school	100.0	1.2	4.8	6.0	11.9	10.7	10.7	7.1	11.9	34.5	1.2
N/A	100.0	0.6	2.7	8.7	8.5	6.4	2.7	4.6	2.9	5.4	50.5
Total	100.0	0.8	4.8	12.5	17.3	16.3	13.5	9.6	0.6	12.2	6.3

Note: (1) N = 5036. From Reference 89. Details are percentages of stub total.

EXHIBIT II-22 INCOME BY CHILD'S RACE

Ethnic Classification	Income (%)[1] Under $3,000	$3,000-$6,000	Over $6,000	Unknown	Total
White	12.6	12.9	3.5	11.8	40.8
Negro	19.7	10.6	2.0	9.5	41.8
Other	0.5	0.3	0.1	0.6	1.5
Unknown	4.1	5.1	1.0	5.5	15.7
Total	36.9	28.9	6.6	27.4	99.8

Note: (1) N = 6309. Details are percentages of total sample.

EXHIBIT II-23 HOUSEHOLD SIZE BY INCOME

Family Income (Annual)	Total	Number of People in Household (%)[1] 2	3	4	5	6	7	8	9	10+	N/A
Less than $1,000	9.0	22.5	11.3	5.6	6.2	8.9	7.0	10.7	13.2	17.0	2.5
$1,000 to $1,999	11.9	25.0	14.6	11.3	11.8	9.7	14.0	12.6	15.3	13.7	2.2
$2,000 to $2,999	17.2	17.5	20.8	18.6	15.6	19.7	16.4	19.0	20.4	17.3	4.7
$3,000 to $3,999	13.0	5.0	14.2	14.8	15.8	14.0	12.8	13.[illegible]	11.4	12.1	2.2
$4,000 to $4,999	9.2	7.5	5.4	10.5	9.5	12.4	9.7	9.9	9.9	7.5	0.9
$5,000 to $5,999	6.8	0.0	5.8	7.8	9.5	8.1	7.9	6.8	5.1	3.6	0.6
$6,000 to $7,999	4.9	0.0	4.2	6.5	6.8	5.2	6.5	4.7	2.1	3.4	0.0
$8,000 to $9,999	1.5	2.5	0.4	2.4	3.0	1.5	1.2	1.2	1.8	0.3	0.0
$10,000 or more	0.8	0.0	0.4	1.6	1.7	0.5	1.0	0.8	0.0	0.2	0.0
Don't know	15.3	12.5	15.8	14.9	15.9	14.8	14.8	15.1	15.9	19.1	8.8
N/A	10.4	7.5	7.1	6.0	4.2	5.2	8.7	5.8	4.8	5.9	78.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: (1) N = 5036. From Reference 89. Details are percentages of caption totals.

EXHIBIT II-24 HOUSEHOLD SIZE BY ETHNIC CLASSIFICATION

Ethnic Classification	Total	Number of People in Household (%)[1]								
		2	3	4	5	6	7	8	9	10+	N/A
Puerto Rican	100.0	0.2	5.7	11.9	18.0	17.3	12.3	6.4	3.7	19.5	4.9
Mexican American	100.0	0.3	3.3	5.3	11.6	16.7	15.4	14.2	10.4	15.9	8.8
White	100.0	0.7	5.3	19.1	21.6	17.2	13.8	8.4	3.5	6.5	3.9
Negro	100.0	1.0	4.7	9.0	15.3	16.5	13.1	11.5	9.5	14.6	4.8
Asian	100.0	0.0	0.0	7.1	14.3	28.6	14.3	7.1	0.0	21.4	7.1
Eskimo	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
American Indian	100.0	0.0	2.9	11.5	8.8	11.8	20.6	5.9	8.8	19.1	10.3
Unknown	100.0	4.2	6.3	16.7	12.5	20.8	12.5	8.3	0.0	4.2	12.5
N/A	100.0	1.1	3.5	10.6	17.2	11.5	12.6	5.7	4.6	11.3	21.9
Total	100.0	0.8	4.8	12.5	17.3	16.3	13.5	9.6	6.6	12.2	6.3

Note: (1) N = 5036. Reference 89. Details are percentages of stub total.

by race and income for age, sex, mother's employment status, level of mother's education, and number of children under 16 in the household are summarized in Exhibits II-18 and II-19. Comparisons of family income and mother's employment status, mother's education and size of household, family income and race, and family income and size of household are presented in 2-factor descriptions in Exhibits II-20 through II-23.

Exhibit II-22 shows a breakdown of income distributions by race. Of the total 1-percent sample, nearly 20 percent came from Negro families whose incomes were under $3,000 per year, while only about 13 percent came from white families whose annual incomes were under $3,000. The large percentage of unreported family income prevents one from obtaining a complete and accurate picture.

As reported in the 1-percent national sample, at least 38 percent of the Head Start families had incomes under $3,000. Sixty-four percent of these had six or more persons in the household. While most of the 64 percent had from 6 to 8 in the family, many had 10 or more persons per household (see Exhibit II-23).

Fifty-six percent of the families with incomes over $3,000 had six or more persons. Fewer families were extremely large. From this data it appears that Head Start children of all income levels tended to come from large families. Inasmuch as there is a relationship between economic well-being and family size for any given level of income, an evaluation of the extent to which Head Start reached impoverished families must, as has been suggested, take into account the size of the Head Start family.

Finally, Exhibit II-24 shows the number of people per household for different ethnic groups.

3. Medical and Dental

An important objective for Project Head Start, Summer 1965, was to provide medical and dental evaluations for all the participating children and to initiate referrals for the care of existing health problems detected among the children. Some of the data collected in these evaluations will be summarized in this subsection.

Inasmuch as the majority of Head Start children were to come from disadvantaged families, it was hypothesized that these children might have more medical problems and many more unmet medical needs than children in the population as a whole. The data collected in the 1965 program was not designed to test this hypothesis. It was designed as a service program to provide medical and dental care for children in low income families, and not to undertake an extensive research effort to test these hypotheses. The data and their interpretation are primarily useful from the point of view of further program planning, if not of basic research. That is, there are valuable implications in the results for planning of services, personnel, facilities, and data collection or recording forms.

Head Start required the completion of medical and dental history and evaluation forms (See Appendix A). The forms were intended to suggest what might constitute a complete examination and to provide a starting point for referrals for needed care. As a research tool, they had severe limitations. For example, there was no independent check used to estimate the reliability or validity of some of the data entered on the form. No special training was provided for the nurses, doctors, and others who completed the forms. In addition, there was little provision for controlling the consistency in the use of the instrument. Criteria for diagnoses or classification of conditions were provided with the medical/dental form. However, there is every reason to believe that these were not followed uniformly. It is known, too, that in many cases, there were not adequate facilities or personnel for proper examination or diagnosis. Nor were there standardized procedures.

These factors are reflected in the data accumulated and reported from these forms. For example, it is known that medical and dental examinations were not provided for all children, even though approved programs had planned to provide such services. It is difficult to determine from the data, however, how many children actually received examinations rather than simply interviews. In the National Opinion Research

Center (NORC) interview survey, 84 percent of the respondents said that their child had received a medical examination, and only 69 percent said that their child had received a dental examination. In Chicago's program, only 68 percent of the Head Start children were examined (13,720 out of a total of 19,980 in the program), although it should be noted that Drs. Irving Abrams and Ralph Spaeth specifically decided to examine only those children whose parents would bring them to equipped medical centers, so that examinations could be thorough.

Despite the substantial qualifications mentioned above, information on medical/dental history and evaluations obtained from the 1-percent sample and selected independent reports are presented here because they are valuable for several reasons. First, a goal of Head Start was to provide adequate medical and dental services to the children. To do this, it is necessary to provide an adequate detection or case-finding system, which means adequate personnel, facilities, equipment, standards, and procedures. To the extent that the data point to specific inadequacies, it is possible for planners to determine where and how to improve programs. Second, although the nationally collected data, as provided in the 1-percent sample, cannot justifiably be regarded as reliable research data, they do in a number of instances provide some rough estimates and inferences about medical/dental deficiencies. Thus, they provide some basis for future program planning. A third reason for presenting these data is that there were some programs which provided thorough examinations for their participants. While all of these local programs will not be described here,[1] the data obtained are of interest, especially as contrasted with the 1-percent sample findings.

The medical/dental history of the Head Start children is summarized in Exhibit II-25. This exhibit contains frequency distributions for the history items from the Medical/Dental Form for the 1-percent sample. The items include information about hospitalization, general health, activities, illness, and visits to doctors. Interpretation of the data is compromised by the large number of "unknown" responses.

---

[1] Reports of several local programs are discussed in Section III.

EXHIBIT II-25 MEDICAL/DENTAL HISTORY (TOTAL)

Medical/Dental Item Number		Percent(1)					
11A.	Hospitalized during past year	Yes 8.3	No 77.0	Don't Know 3.3	Unknown 11.3		
11B.	How often?(3)	Once 69.4	2-3 Times 13.5	4 or More 1.9	Unknown 15.2		
12.	Hospital problem(3)	Illness 34.7	Surgery 12.9	Accident 14.8	Tonsillectomy 13.9	Other 10.1	Unknown 13.6
13.	Children born in	Hospital 71.8	Home 11.8	Other 2.7	Don't Know 4.3	Unknown 9.4	
14.	Weight at birth (nearest pound)	Under 5 3.8	5 to 7 55.5	8 to 10 19.6	Over 10 .6	Unknown 20.4	
15.	Anything unusual at birth	Yes 5.4	No 77.9	Don't Know 3.3	Unknown 13.4		
17.	General health	Very Good 31.7	Good 51.2	Fair 6.7	Poor 0.4	Unknown 10.1	
19.	Activities of children	Unable 1.3	Limited 6.6	Not Limited 79.6	Unknown 12.4		
20.	Last visit to doctor	Past Year 50.6	1-2 Years 15.7	Over 2 Years 12.2	Never 6.1	Unknown 15.4	
21.	Last visit to dentist	Past Year 20.1	1-2 Years 4.3	Over 2 Years 1.8	Never 57.5	Unknown 16.3	
22.	Serious illness or accident in past year	Yes 4.2	No 74.6	Don't Know 2.8	Unknown 18.5		

Note: (1) N = 6309 unless otherwise noted.

(2) Some questions included a space for a "Don't Know" or "Can't Remember" response. Where applicable, these are reflected. For each question the "Unknown" percentage is the remainder of the N which may not have answered or been processed.

(3) N = 527 (total "Yes" responses to 11A).

It is assumed that the responses to the questions in Exhibit II-25 were obtained through an interview, probably with a parent. Although this was not always the case, and although the parent may not always have been able to provide reliable information, nonetheless, some interesting observations are possible.

For example, the data suggests that the population examined did indeed represent a group that had received poorer care than other socio-economic groups. An indication of this is the number of children who were not born in hospitals and had not visited a doctor or dentist in the recent past. As shown in Exhibit II-26, there are higher percentages of Negro children born outside hospitals and of Negro children who have never visited a doctor or dentist. Other differences by race appear to be in the number of hospitalizations, where the Negroes have a lower percentage. However, the Negro children appear to have had more serious illnesses. This data is analogous to that reported by the National Health Survey. Children in low income families were hospitalized less frequently but they tended to have longer hospitalizations, suggesting more severe illnesses.

Exhibit II-27 compares selected 1-percent sample medical/dental history information with two specific programs.

A description of the immunization history of the Head Start children from the 1-percent sample is given in Exhibits II-28 and II-29. Again, the data in these exhibits are difficult to analyze due to the large percentage of "unknowns" for each item. In most cases this percentage exceeds 30 percent. While many immunization history forms may not have been completed for reasons cited in the discussion of the medical/dental history, it is also likely that many parents interviewed did not know the immunization status of their children. In Chicago, a review of 2,460 Head Start records revealed that many parents were unable to recall the number of immunizations their children had received. The "yes" and "no" responses to these questions may also be suspect. Parents may not have been informed, for example, as to what constitutes a completed DPT or Oral Polio series. Thus, the best estimate that can be

EXHIBIT II-26 MEDICAL/DENTAL HISTORY AND RACE

Medical/Dental Item Number		White-Negro(1)					
11A.	Hospitalized during past year	Yes 10*-8**(2)	No 78-84	Don't Know 6-2	Unknown 6-6		
11B.	How often?(3)	Once 69-68	2-3 Times 12-14	4 or More 1-2	Unknown 18-16		
12.	Hospital problem(3)	Illness 31-38	Surgery 13-15	Accident 13-17	Tonsillectomy 19-9	Other 8-11	Unknown 16-10
13.	Children born in	Hospital 80-70	At home 6-20	Other 4-2	Don't Know 6-4	Unknown 4-4	
14.	Weight at birth (nearest pound)	Under 5 4-5	5 to 7 58-60	8 to 10 23-18	Over 10 1-1	Unknown 14-16	
15.	Anything unusual at birth	Yes 6-5	No 78-85	Don't Know 7-2	Unknown 9-8		
17.	General health	Very Good 37-32	Good 49-56	Fair 9-6	Poor <1-<1	Unknown 5-6	
19.	Activities of children	Unable 1-1	Limited 5-8	Not Limited 86-82	Unknown 7-9		
20.	Last visit to doctor	Past Year 56-49	1 to 2 Years 17-17	Over 2 Years 12-14	Never 4-8	Unknown 11-12	
21.	Last visit to dentist	Past Year 24-17	1 to 2 Years 5-4	Over 2 Years 2-2	Never 57-64	Unknown 12-13	
22.	Serious illness or accident in past year	Yes 5-4	No 77-81	Don't Know 5-1	Unknown 13-14		

Note: (1) White N = 2575, Negro N = 2648, unless otherwise noted.

(2) *White; **Negro.

(3) White N = 252, Negro N = 199 (total "Yes" responses to 11A).

EXHIBIT II-27 MEDICAL/DENTAL HISTORY: HEAD START SURVEY COMPARISONS

	Percent		
	1-Percent Sample N = 6309	Alexandria N = 345 (341)	Warminster, Penna. N = 30
Last visit to doctor			
Past year	50.6	80.0	53.3
1-2 years	15.7	13.0	20.0
Over 2 years	12.2	5.0	16.7
Never	6.1	2.0	
Unknown	15.4	-	
Last visit to dentist			
Past year	20.1(1)	49.0	6.7
1 year or more	5.6	11.0	6.7
Never	57.5	40.0	76.7
Unknown	16.3	-	10.0
Serious illness or accident past year			
Yes	4.2	-	13.3
No	74.6	-	-
Don't know	2.8	-	-
Unknown	18.5	-	-
Hospitalization past year			
Yes	8.3	-	13.3
No	77.0	-	-
Don't know	3.3	-	-
Unknown	11.3	-	-

Note: (1) By way of comparison, the 1956 California Health Survey reports that 49 percent of the 4- to 5-year-old children of 809 families had visited the dentist at least once.

EXHIBIT II-28 IMMUNIZATION HISTORY (TOTAL)

Medical/Dental Item Number		Percent(1)				
		Yes	No	Don't Know	Unknown	
24B.	DPT series complete	51.5	14.4	5.8	28.3	
25.	Salk vaccine received	51.9	18.7	8.5	20.9	
26B.	Oral polio series complete	48.3	13.1	4.4	34.2	
27A.	Measles vaccine received	11.8	61.4	8.4	18.4	
28.	TB vaccine (BCG) received	6.2	54.5	7.2	32.1	
29A.	Vaccination scar present	54.6	22.8	5.3	17.3	
29B.	How many years since last smallpox vaccination	Within 3 Years 39.2	More Than 3 Years 14.9	Never 13.1	Don't Know 17.4	Unknown 15.5
30A.	TB test received before summer 1965	Yes 16.4	No 62.2	Don't Know 7.5	Unknown 13.5	
31.	Children exposed to active tuberculosis	2.8	71.5	11.0	14.7	

Note: (1) N = 6309.

EXHIBIT II-29 IMMUNIZATION HISTORY AND RACE

Medical/Dental Item Number		White (%)(1)				Negro (%)(1)			
		Yes	No	Don't Know	Unknown	Yes	No	Don't Know	Unknown
24B.	DPT series complete	61	13	8	19	48	18	19	15
25.	Salk vaccine received	56	21	7	16	54	17	13	16
26B.	Oral polio series complete	56	13	3	28	47	14	7	32
27A.	Measles vaccine received	13	67	6	14	12	61	14	13
28.	TB vaccine (BCG) received	3	64	7	25	8	62	11	21
29A.	Vaccination scar present	61	22	5	12	60	21	8	9
30A.	TB test received before summer 1965	14	71	7	9	13	69	11	5
31.	Children exposed to active tuberculosis	3	75	14	9	3	76	13	9

Note: (1) White N = 2575; Negro N = 2648.

made from this data is that a large number of Head Start children had received some of these inoculations. This uncertainty is a significant problem in assisting disadvantaged children; it suggests that a great deal more attention needs to be given to ways of obtaining adequate and valid data from which the kind and amount of services needed can be determined.

The immunization history information from the 1-percent sample indicates that at least 2.8 percent of the children had been exposed to active tuberculosis, which is probably an underestimate. Assume for a moment that this indeed represents an exposure rate in the Head Start population of 2,800 per 100,000. Then consider that the national incidence of new cases of tuberculosis per year is around 30 per 100,000. If the data have any significance, they suggest an especially high probability of occurrence of the disease in the populations served by Head Start. Thus, it is of particular interest to note that the majority of the children had not received a tuberculin test. The implication is clear enough; special efforts must be made to reach these children with medical service.

One of the most readily identifiable items in an immunization history is the presence of a vaccination scar. Slightly over half the children were reported to have had a scar. The percentage of children who were never vaccinated is higher than data provided in studies of the general population. It is possible, of course, that the low percentage of vaccinations for these children may stem from the fact that immunizations are generally brought up to date at the insistence of school authorities prior to entrance into school.

Aside from the data provided in the 1-percent sample, there is some data in three independent studies. The San Diego study reported that, for 547 children, approximately 77 percent needed both a measles vaccine and a tuberculin test. In Chicago, a review of 2,460 Head Start records revealed that many parents were unable to recall the number of immunizations their children had received.

Exhibit II-30 primarily compares data in the 1-percent sample with certain local Head Start studies, in addition to a 1956 survey of child health in California.

EXHIBIT II-30 IMMUNIZATION HISTORY: SURVEY COMPARISONS

	Head Start (%)				General (%)
	Head Start % Sample N = 6309	Greene County N = 375	San Diego N = 547	Warminster, Penna. N = 30	California 1956 Survey N = 809(1)
DPT inoculations					18.0(2)
Yes	51.5	-	-	53.5	-
No	14.5	21.7(3)	-	46.7	-
Unknown	28.3	-	-	-	-
Don't know	5.8	-	-	-	
Live attenuated polio vaccine					
Yes	48.3	-	-	40.0	-
No	13.1	20.4(4)	-	36.7	-
Unknown	34.2	-	-	23.3	-
Don't know	4.4	-	-	-	-
Measles vaccine received					
Yes	11.8	-	-	-	-
No	61.4	-	79.0	-	-
Unknown	18.4	-	-	-	-
Don't know	8.4	-	-	-	-
Vaccination scar present					
Yes	54.6	-	-	-	-
No	22.8	34.1	-	-	-
Unknown	17.3	-	-	-	-
Don't know	5.3	-	-	-	-

EXHIBIT II-30 (Continued)

	Head Start (%)				General (%)
	Head Start % Sample N = 6309	Greene County N = 375	San Diego N = 547	Warminster, Penna. N = 30	California 1956 Survey N = 809(1)
Number of years since last vaccination					
Under 3 years	39.2	-	-	-	-
Over 3 years	14.9	-	-	-	-
Never	13.1	-	-	-	-
Unknown	15.5	-	-	-	-
Don't know		-	-	-	-
TB test received before 1965					
Yes	16.4	-	-	-	-
No	62.2	-	77.0	-	-
Unknown	13.5	-	-	-	-
Don't know	7.5	-	-	-	-

Notes: (1) 1956 survey of 809 families of 4 to 5-year-old children.

(2) Percentage deemed adequately protected.

(3) Percentage who have had no DPT shots.

(4) Percentage who have had no Salk or Sabin vaccine.

The results of the physical examinations for the 1-percent sample are shown in Exhibit II-31. The tests to be given to each child included visual screening, tuberculin testing, urine tests, blood tests, and hearing tests, as well as a dental examination. The reports of these examinations suggest that there was often a need for additional personnel and facilities to conduct adequate examinations. There is evidence that such resources were not sufficiently available in 1965.

There is no indication on the form of whether or not the child was given a physical examination. The data from the dental examination indicate that 44 percent of the children had some type of dental defect. The usual finding is a much higher incidence of children with dental defects in this age group. In Head Start it is unknown what types of examinations were given or whether they were given by a dentist, doctor, or nurse. If X-rays had been available, for example, the incidence might have been higher. The problem of adequate dental examinations is heightened by the fact that several counties had too few dentists to be able to participate in Head Start.

The results of the tuberculin testing are negated by the large number of unknown responses. These suggest that a test may have been given but that it was not read at the appropriate 48-hour interval, thus probably indicating poor follow-up. Urinalyses for protein and sugar also showed 50 percent unknown responses. Quite probably, "unknown" means that the test was not carried out, indicating no facilities and personnel were available for this procedure. In Greene County, Ohio, for example, urinalyses were performed only in one of eight communities with Head Start programs.

Almost half of the children in the sample did not have a hemoglobin determination or were designated as unknown for this category. This is particularly unfortunate since the test is relatively simple and the results generally reliable. The personnel and equipment may not have been available for this test. The available data for the sample tested indicate that at least 34 percent had hemoglobin levels suggesting anemia (see Exhibit II-31, Item 39). A somewhat smaller percentage was found in Chicago (see Exhibit II-32). The determination of possible anemia with

EXHIBIT II-31 EXAMINATION RESULTS (TOTAL)(1)

		Item(2)	Percent
32.	Visual screening tests		
	A.	Acuity	
		Abnormal	3.6
		Test normal	45.1
		Not done	5.7
		Unknown	45.3
	C.	Hyperopia	
		Abnormal	.3
		Test normal	8.5
		Not done	17.4
		Unknown	73.8
	D.	Cover test	
		Abnormal	.5
		Test normal	14.1
		Not done	14.3
		Unknown	71.0
	E.	Worth dot test	
		Pass	4.5
		Fail	.3
		Unknown	95.2
	F.	Other abnormality noted	.3
33.	Dental examination		
	A.	Performed by	
		Dentist	47.0
		Physician	19.9
		Nurse	6.5
		Other	2.5
		Unknown	24.1

EXHIBIT II-31 (Continued)(1)

Item(2)	Percent
B. Findings	
Carious teeth:	
1-3	21.3
More than 3	17.8
Unknown	-
Infection	1.9
Malocclusion	3.9
Periodontal disease	.5
No disease	32.3
Other	1.6
Unknown	30.5
34. Weight (in pounds)	
Under 31	1.2
31 to 36	7.3
37 to 42	26.7
43 to 50	38.3
Over 50	10.8
Unknown	15.7
35. Height (in inches)	
Under 36	1.1
37 to 40	3.1
41 to 44	28.1
45 to 48	46.2
Over 48	4.7
Unknown	16.8
36. TB test given at centers	
Mantoux	17.0
Tine	22.4
Patch	4.6
Unknown	56.0

EXHIBIT II-31 (Continued)(1)

Item(2)	Percent
37. Results of TB test	
Positive	.8
Negative	52.0
Unknown	46.7
Uncertain	.4
38. Urine Test	
A. Albumin	
Positive	1.5
Negative	46.5
Unknown	52.0
B. Sugar	
Positive	.3
Negative	53.0
Unknown	46.7
39. Blood determination	
Microhematocrit (percent)	
Below 36	3.4
36 or above	6.3
Hemoglobin (gram-0/0)	
Below 11	34.1
11 or above	13.6
Unknown	42.5
40. Hearing	
A. Screening test	
Not done	9.0
Audiometry	38.0
Voice or other	20.8
Unknown	32.2

EXHIBIT II-31 (Continued)(1)

	Item(2)	Percent
B.	Results	
	Unsatisfactory test	2.3
	Normal	59.2
	Abnormal	1.2
	Unknown	37.3

Notes: (1) N = 6309.

(2) All item numbers refer to medical/dental form.

EXHIBIT II-32 MEDICAL IMPRESSIONS: SURVEY COMPARISON

	Medical Problems	Head Start Surveys									General Survey	
		Head Start % Sample (N = 6309)	Chicago		Greene County, Ohio (N = 375)	Cambridge, Massachusetts		San Diego (N = 547)	Alexandria, Virginia (N = 330)	Warminster, Penna. (N = 30)	National Health Survey(1) 0-4 Years	National Health Survey(1) 5-9 Years
		%	N	%	%	%	%	%	%	%	%	%
1.	Asthma, hay fever, other allergies	4.1	-	-		-	-	-	-	-	5.7	8.0
2.	Skin infections and other disease	2.9	-	-	3.7	-	-	-	-	6.7	.6	.6
3.	Frequent respiratory illness, including bronchitis	3.8	-	-	-	-	-	-	-	-	2.7	3.7
4.	Tonsil/adenoid disease	8.7	13,720	5.6	12.3	-	-	-	4.5	-	-	-
5.	Anemia	5.3(2)	-	-	-	-	-	-	4.8(2)	0.0	.4(2)	.3(2)
	10.9 grams hemoglobin or less	34.1	2,319	31.6	-	-	-	-	-	-	-	-
	9.9 grams hemoglobin or less	-	2,319	8.5	-	-	-	-	-	-	-	-
6.	Hernia	.8	13,720	2.4	1.3	-	-	-	4.2	-	.9	.5
7.	Heart disease	2.1	13,720	2.2	5.9	-	-	-	2.4	-	.3	.4
8.	Orthopedic problems	2.3	-	-	6.7	-	-	-	-	17.0	-	.4
9.	Enuresis	2.8	-	-	-	-	-	-	-	23.0	-	-
10.	Parasitic infestation	4.2	-	-	-	-	-	-	.3	-	-	-
11.	Convulsive disorder	.5	-	-	-	-	-	-	-	-	-	-
12.	Urinary infections(3)	2.0	13,720	2.2	14.7(4)	-	-	-	-	-	-	-
13.	Speech abnormality	2.3	-	-	3.5	341	13.0(5)	-	-	13.3	-	-
14.	Hearing impairments	1.2(5)	17,115	5.5(5)	-	330	7.0	-	-	13.3	-	.8
15.	Vision defects	7.1(6)	14,593	10.4	-	366	10.0	-	5.2	10.0	-	.4
16.	Dental defects	44.1	2,376	36.8	58.7(7)	398	33.0	21.0	23.0	46.7	-	-

Notes: (1) Based on household interviews (July 1959 - June 1961). Percentages in this table are based on 1960 Census data for these two age groups (0-4: 20,321,000; 5-9: 18,692,000). Percentages are based on average annual number of chronic conditions.

(2) Hemoglobin count not identified.

(3) Includes urinary tract infections, kidney disease, and albumin in urine.

(4) Urinalyses performed only on 150 children; percentage is of 150.

(5) Percentage who failed or had abnormal results from test.

(6) Accumulative percentages of defects noted in several tests; see Exhibit II-31.

(7) N = 342.

this relatively objective test in such a large percentage of children suggests that special efforts should be made to investigate this problem further.

The results of the hearing test indicate that only a small percentage of the children have hearing abnormalities. However, it must be stressed that Exhibit II-31 indicates that as many as 60 percent of the children might not have received an adequate hearing test.[1]

The large number of "unknowns" may mean that the test was not given, that there was loss of information at some stage of data handling, or that some children were not able to cooperate with this type of testing.[2] It is possible that children from this socio-economic group are not familiar with testing techniques and will, therefore, require more of the tester's time. This last point is another factor to be considered in planning the scope and cost of a program.

The independent studies provide little additional information concerning the vision and hearing tests administered as a part of Head Start, Summer 1965 (Exhibit II-32). In Chicago, 70 percent of the Head Start children received vision tests in the schools, and 9 percent of the tested children showed vision defects. Eighty-three percent of the children received hearing tests in the school (that is, the vision and hearing tests were not part of the medical examinations, which were conducted at regular clinic facilities), and 5 percent of those tested showed defects. In the visual acuity tests conducted by the Cambridge, Massachusetts, Health Department for the Head Start program, 9 percent of the children showed some kind of visual defect, 7 percent failed the hearing test, and 70 percent required dental treatment. The problem of non-testability was not discussed in these studies, but its implications have been noted above. In general, the need for adequate assessment of vision and hearing takes on added importance with socially disadvantaged children in particular, since these modalities are so important in the learning process and since these children are apt to be subject to reduced visual and auditory discrimination ability from nonphysiological stresses as well.

---

[1] Question 40A: 9 percent not done; 20.8 percent received voice or other test (generally considered unacceptable); and 32.2 percent unknown.

[2] For example, a study of visual testing of low income preschool children by Dr. Roberta A. Savitz, et al., found that more than 1/3 of the children were unable to understand the requirements of the test and to cooperate. (Children's Bureau Publication No. 414, 1964.)

Height and weight determinations are reasonably objective measures of growth and provide one of the few relatively uniform measures for comparisons in these examinations. Appendix C includes percentiles of heights and weights for different age levels by sex.

In Greene County the average weight and height of the Head Start children were compared with normal values from data collected by the Department of Maternal and Child Health, Harvard School of Public Health. Results suggested that in some age ranges Head Start children are lighter than the Harvard weights for the same age and sex. Overweight is also manifest. Both of these conditions can be indicative of poor nutritional status.

The information concerning the diagnostic categories for the 1-percent sample, selected Head Start medical reports, and the National Health Survey of the total population is given in Exhibit II-32. As stated earlier, it had been anticipated that the Head Start children, coming from low income families, would have a higher incidence of medical problems than other child populations. The data in the 1-percent sample at least suggest a much lower incidence than expected. The prevalence levels found in the independent medical studies tend to be higher than the 1-percent sample finding. However, it is not known whether the relatively low incidence shown in the sample is (1) representative of the general health of the children, or (2) suggestive that the examinations were inadequate. As noted before, some evidence indicates that in many programs adequate personnel and facilities were lacking. Also, in order to diagnose completely many of the medical problems listed in Exhibit II-32, trained personnel and specialized facilities are needed.

The extent and implications of these uncertainties are worth further consideration. The diagnosis of allergies, for example, requires specialized personnel and facilities, as well as sufficient time to explore with a parent significant areas of past health. The factor of time and experience in interviewing is important in eliciting reliable information about enuresis and many other problems. Skin problems frequently require more than one examination. The diagnosis and evaluation of anemia needs equipment. The detection of heart disease requires that children be sent to specialized clinics for proper diagnosis. Enuresis was noted for 2.8 percent of children in the sample; other studies have indicated that the rate for children aged 4 through 6 years is about 10 to 25 percent. Enuresis is difficult to determine except by intensive probes to elicit this information. The observed result in the Head Start sample may be due to a lack of time and trained personnel.

Diagnoses were made of some medical problems not listed in Exhibit II-32. These are chronic otitis media, frequent gastrointestinal upset, mental retardation, cerebral palsy, and nutritional disorders. In these cases the percentages with such problems were either so divergent from general studies or the classifications were so general that any meaningful interpretation was not considered possible; hence, the data were not included here.

There appear to be some racial differences, as shown in Exhibit II-33. The total number of disorders checked for the white children was 1,162, compared with only 833 for the Negro children. For most of the disorders, the white children had greater frequency of symptoms checked, except for a few including asthma, skin infection, and nutritional disorders for which the Negroes showed greater frequency. However, these differences may not be real; it is not known whether children of different races received the same level of service.

In looking at the prevalence of medical problems among various Head Start groups, there may be some value in examining distributions of data on disorders among children according to other variables such as the mother's employment status and/or educational level. These and other possible classifications were not made for this report, although the data could be obtained from the OEO data files developed from the 1965 data collection. Similarly, it is possible that something could be learned about the health of the Head Start children by determining the number of children with multiple medical problems. It was indicated in the Chicago study, for

EXHIBIT II-33 DIAGNOSES AND IMPRESSIONS

Medical/Dental Item	White(1)		Negro(1)	
	Present (Percent)	Suspect (Percent)	Present (Percent)	Suspect (Percent)
Asthma, hay fever, other allergies	4	1	2	1
Skin infection or other disease	1	<1	4	1
Frequent respiratory illness, including bronchitis	5	1	2	1
Tonsil/adenoid disease	8	3	5	2
Anemia	5	2	3	1
Hernia	<1	<1	1	<1
Heart disease	1	1	1	1
Orthopedic problems	2	<1	1	1
Urinary infections	1	1	1	1
Frequent gastrointestinal upset	1	<1	<1	-
Enuresis	3	<1	1	1
Speech abnormality	2	1	1	<1
Parasitic infestation	6	1	1	1
Convulsive disorder	<1	<1	<1	<1

Note: (1) White N = 2575; Negro N = 2648 example, that there were an average of 1.29 defects per child with defects. However, such counts were not made at this time, although the data in storage in the 1-percent sample tape files could be used to generate such tables in future analyses.

In summary, the available information on the medical and dental evaluations suggests that the health of the Head Start children was better than had been anticipated. While there is no sound methodological or statistical basis for such a conclusion, we do feel that much was accomplished in the first stage of providing preventive and corrective medical and dental services, namely detection and identification of disorders. We also feel that the information available from these evaluations is particularly helpful in suggesting steps that can be taken in planning how the goals of the medical program can better be met.

4. Results of the PPVT Pretest

In this subsection, the results of the PPVT pretest scores will be discussed for the national sample of children for whom pretest scores could be identified. The total sample size for this analysis was 634. The mean PPVT pretest raw score for this sample was 47.6. The average age of the children in the sample was approximately 5 years and 8 months. The average PPVT raw score for this age group as reported in the PPVT test manual is approximately 53. Thus, this sample of children averaged somewhat lower than the children who were used to establish the norms. However, there are indications that the average pretest scores of Head Start children were even lower than those suggested by the results of the 1-percent sample. Lower scores are reported in each independent study which has been reviewed. The reader is cautioned, then, about the external validity of the results. More detailed discussion of the possible sources and direction of bias is given in Section II. F.

The mean PPVT pretest scores were obtained for groups within a number of factors or categories: age, race, sex, family intactness, household size, mother working or not working, urbanity, income, and region. The differences between the groups within each factor were tested for significance. The results of this analysis are presented in Exhibits II-34 through II-42. Each exhibit contains the name of the groups within the categories, the number of children in each group, the PPVT pretest mean for each group, the difference between means for each pair of groups, and the difference between the mean score for each group and the total unweighted mean.

Thus, in Exhibit II-34, results are shown for the age factor classification. The first column on the left gives the group names (less than 5, etc.). The number (N) of children in each group is given in the next column. Pretest means for each group are given in the next column, with the total unweighted mean for the factor or category at the bottom. The difference between each pair of means is given in the matrix in the next column. The letters at the top (A, B, C) designate the groups named in the rows. The last column, labeled "Total," gives the

EXHIBIT II-34 PPVT PRETEST SCORES BY AGE

Age	N	Means	Difference			
			A	B	C	Total
A. Less than 5 years	93	37.38	X	-10.79*(1)	-14.04*	-8.28*
B. 5 years	354	48.17		X	- 3.25*	2.51*
C. More than 5 years	187	51.42			X	5.76*
Total	634	45.62				

Note: (1) Asterisk (*) indicates $p < .05$.

EXHIBIT II-35 PPVT PRETEST SCORES BY RACE

Race	N	Pretest Mean	Difference			
			A	B	C	Total
A. White	270	50.9	X	6.0*(1)	.1	2.1
B. Negro	313	44.9		X	-5.9	-3.9
C. Other	8	50.8			X	1.9
Total	591	48.8				

Note: (1) Asterisk (*) indicates p < .05.

EXHIBIT II-36 PPVT PRETEST SCORES BY SEX

Sex	N	Mean	Difference		
			A	B	Total
A. Male	301	48.9	X	6.0*(1)	1.3*
B. Female	320	46.3		X	-1.3*
Total	621	47.6			

Note: (1) Asterisk (*) indicates $p < .05$.

EXHIBIT II-37 PPVT PRETEST SCORES BY FAMILY INTACTNESS

Family Intactness	N	Mean	Difference				
			A	B	C	D	Total
A. Mother and father	425	48.7	X	3.3	-2.4	3.6	1.1
B. Mother only	121	45.4		X	-5.7	0.3	-2.2
C. Father only	19	51.1			X	6.0	3.5
D. Other	33	45.1				X	-2.5
Total	598	47.6					

EXHIBIT II-38 PPVT PRETEST SCORES BY HOUSEHOLD SIZE

Household Size	N	Pretest Mean	Difference		
			A	B	Total
A. More than 8	106	45.6	X	-2.5	-1.2
B. 8 or less	528	48.1		X	1.3
Total	634	46.8			

EXHIBIT II-39 PPVT PRETEST SCORES ON THE BASIS OF WHETHER THE MOTHER WORKS

Mother Works	N	Mean	Difference		
			A	B	Total
A. Yes	215	47.8	X	.2	.1
B. No	348	47.6		X	-.1
Total	563	47.7			

EXHIBIT II-40 PPVT PRETEST SCORES BY URBANIZATION

Urbanization		N	Pretest Means	Difference				
				A	B	C	D	Total
A.	Urban	383	46.1	X	-7.3*(1)	-4.3*	2.8	-2.2
B.	Farm	47	53.4		X	3.0	10.1	5.1*
C.	Rural, Nonfarm	159	50.4			X	7.1	2.1*
D.	Other	22	43.3				X	-5.0
	Total	611	48.3					

Note: (1) Asterisk (*) indicates $p < .05$.

EXHIBIT II-41 PPVT PRETEST SCORES BY INCOME

Income			Difference									
	N	Means	A	B	C	D	E	F	G	H	I	Total
A. Less than $1,000	48	43.5	X	-3.0	-4.5	-4.5	-4.5	-8.5	-9.6	-5.9	8.8	-3.5
B. $1-1,999	97	46.5		X	-1.5	-1.5	-1.5	-5.5	-6.6	-2.9	11.8	- .5
C. $2-2,999	150	48.0			X	0.0	0.0	-4.0	-5.1	-1.4	13.3	1.0
D. $3-3,999	83	48.0				X	0.0	-4.0	-5.1	-1.4	13.3	1.0
E. $4-4,999	60	48.0					X	-4.0	-5.1	-1.4	13.3	1.0
F. $5-5,999	42	52.0						X	-1.1	2.6	17.3	5.0
G. $6-7,999	31	53.1							X	3.7	18.4	6.1
H. $8-9,999	5	49.4								X	14.7	2.4
I. $10,000 or more	3	34.7									X	-12.3
Total	519	47.00										

EXHIBIT II-42 PPVT PRETEST SCORES BY REGION

Region			Difference							
	N	Means	A	B	C	D	E	F	G	Total
A. Northeast	56	46.7	X	-6.2	-2.0	3.6	-8.6	1.81	-2.5	-1.94
B. Middle Atlantic	210	52.9		X	4.2	9.8*(1)	-2.4	8.0*	3.7	4.22
C. Southeast	151	48.7			X	5.6	-6.6	3.8	- .5	- .01
D. Midwest	65	43.1				X	-12.2	-1.8	-6.1	-5.61
E. West	12	55.3					X	10.4	6.1	6.62
F. Southwest	101	44.9						X	-4.3	-3.75
G. Far West	39	49.2							X	.48
Total	634	48.7								

Note: (1) Asterisk (*) indicates $p < .05$.

difference between the subgroup mean and the total unweighted mean. All differences that were calculated to be significant beyond the 5-percent level are indicated by an asterisk. For the three age levels, there were significant differences between all pairs of means, and between each mean and the total mean.

Exhibit II-35 presents the data for race. In the sample there were 270 whites, 313 Negroes, and 8 from other races. There was a significant difference between the means for the white and the Negro race; however, no group differed significantly from the total.

Exhibit II-36 presents the data for sex. This shows that the male children scored significantly higher than the female children. For the family intactness question, no significant differences were found, as shown in Exhibit II-37. Similarly, household size and the question whether or not the mother works showed no significant differences. This is shown in Exhibits II-38 and II-39. Exhibit II-40 indicates that there are significant differences between urban and farm children, and urban and rural nonfarm children. Exhibit II-41 presents the data by income. Again, no significant differences were found, although there is an indication that children from families with higher income tend to do better. Finally, Exhibit II-42 shows data for the seven Head Start regions.

A few words of comment seem appropriate here. First, the age results do not seem surprising, since raw scores are used as the measure of performance. It would be expected that there would be an increase with age. The finding that boys scored significantly higher than girls is definitely surprising, however. This result was contrary to common expectations of developmental rates. There was one independent study in which a similar finding was reported (Reference 59). Head Start boys and girls were compared with a middle-class nursery school group on discrimination learning problems. Performance of boys in Head Start was superior to performance of Head Start girls in the simultaneous discrimination learning problems. The investigators were surprised at the relationship and suggested tentatively that "the generally accepted proposition that girls show faster development than boys might hold true for the middle income ... group but not for the low income Head Start group. In fact, the reverse might be true" (op. cit., page 21).

The relative performance of whites, Negroes, and others on the pretest is interesting. Unfortunately, there is but little direct check on the consistency of this ordering in some of the more controlled studies, since the composition of groups as reported was generally not specified in terms of these characteristics. In a progress report, Chesteen (Reference 18) reported pretest PPVT IQ scores for lower income and middle income white and Negro groups. At each income level, the white group was higher than the Negro group.

No difference was detected in pretest standing for most of the socio-economic variables considered. Rank order correlation coefficients were calculated for the means ordered by income level (see Exhibit II-41). When the calculation included the highest level group (over $10,000), rho was not significant. When that very small and extreme group was dropped, a significant positive relationship ($r_s \simeq .90$, $p < .01$) was obtained.

Another surprising result was the higher performance of rural farm children and rural nonfarm children, as compared with urban children. It is very difficult to interpret this result; there are many alternatives and too little information. Similarly, it is difficult to interpret or even speculate on the meaning of the obtained differences by region. There were only two, both involving the Middle Atlantic region, which was significantly higher than the two lowest scoring regions, Midwest and Southwest.

5. Emotional and Social Development

The primary source of descriptive information on the emotional and social characteristics of the Summer 1965 Head Start children was the Psychological Screening Procedure (PSP). The PSP was a rating form developed especially for Head Start to identify children with fairly severe psychological/emotional/behavioral problems. (See Appendix A for a copy of the PSP.) Instructions were that the PSP be used by the teachers about 4 weeks after the program was underway, so they would be more familiar with the children. Thus, the PSP was not a prepost instrument intended to measure change in children. (Considerable descriptive information is included in impact information concerning psychological, emotional, and social areas. See subsection IV.C.3.) Exhibit II-43 summarizes the data reported for 30 specified symptoms for (1) the 1-percent nationwide sample; (2) white children in the 1-percent sample; and (3) Negro children in the 1-percent sample. Exhibit II-44 summarizes the data, using the same categories of children as Exhibit II-43, for reported incidence of nine specific typologies of emotional disturbance. Exhibit II-45 summarizes information on the percentages of children who were referred for further diagnosis and treatment of emotional problems.

Exhibits II-43 and II-44 reflect a remarkably high incidence of emotional health, as indicated by the extremely small percentages of reported emotional or behavioral problems. Only three symptoms were reported in more than 5 percent of the sample--selfish or greedy hoarding, anxiety in new situations, and inability to remain seated very long--and it would appear that these three symptoms reflect somewhat less disturbance than most of the other symptoms defined.

One independent study (Reference 6) also reported results on the PSP for 393 children. The findings of Dr. I. N. Berlin (University of Washington) are summarized in Exhibits II-46 and II-47. (Exhibit II-46 lists symptoms in rank order of frequency of reported occurrence.)

It can be seen that for all items in symptoms and typologies, Berlin's teachers reported several times as many occurrences as were reported by teachers in the nationwide sample. And yet, Berlin indicated that he believed his findings reflected a substantially artificial, low incidence of occurrence of the symptoms and typologies. He attributed this to a generally hostile attitude on the part of the teachers (who made the ratings) toward this research task. The teachers, for example, had indicated that they felt protective toward the children and did not want them to appear inferior.

The scarcity of available and reliable research data on the emotional and psychological characteristics of the Head Start children makes it impossible to present a complete or accurate picture of the children; however, there are some subjective comments that shed light on the

EXHIBIT II-43 PSYCHOLOGICAL SCREENING PROCEDURE: SYMPTOMS (NATIONWIDE SAMPLE)

Item Number	Description	Percent		
		Total	White	Negro
1.	Selfish or greedy hoarding	5.9 (2.5)[1]	4.4 (4)	8.1 (2)
2.	Refuses to eat or drink	.9 (15.5)	.5 (18.5)	1.4 (11)
3.	Holds breath until loses typical color	- (28.5)	- (27.5)	- (28)
4.	Temper tantrum--throws self about, etc.	.9 (15.5)	.7 (14.5)	1.2 (14)
5.	Temper tantrum--attacks others	.4 (20.5)	.5 (18.5)	.5 (21)
6.	Abuses self	- (28.5)	- (27.5)	- (28)
7.	Bites others in anger	.3 (23)	.5 (18.5)	.2 (24.5)
8.	Places foreign objects in body openings	.2 (24)	- (27.5)	.5 (21)
9.	Stutters excessively	1.6 (10)	1.7 (9)	1.2 (14)
10.	Faints or passes out	- (28.5)	- (27.5)	- (28)
11.	Complains of pains in head or stomach	1.4 (11.5)	1.2 (11.5)	1.2 (14)
12.	Interested in few activities	4.7 (4)	4.7 (3)	5.2 (4)
13.	Cries excessively/anxious when reprimanded	2.7 (6)	2.5 (6.5)	3.3 (6)
14.	Frequently wanders or runs away	.9 (15.5)	1.0 (13)	1.2 (14)
15.	Will not feed self	- (28.5)	- (27.5)	- (28)
16.	Almost constant thumbsucking	1.4 (11.5)	.5 (18.5)	2.6 (7)
17.	Excess clinging to some object	.4 (20.5)	.5 (18.5)	.5 (21)
18.	Asks to be called by another name	.4 (20.5)	.5 (18.5)	.5 (21)

EXHIBIT II-43 (Continued)

Item Number	Description	Percent		
		Total	White	Negro
19.	Very anxious in new situations	5.9 (2.5)	6.9 (1)	8.3 (1)
20.	Constantly criticizes self	.4 (20.5)	.2 (23)	.5 (21)
21.	Often cries or laughs inappropriately	1.1 (13)	.7 (14.5)	1.9 (8.5)
22.	No interest in playing with other children	3.8 (5)	3.9 (5)	4.0 (5)
23.	Cannot communicate with language	2.1 (7)	2.5 (6.5)	1.7 (10)
24.	Sits rocking back and forth	.5 (18)	.2 (23)	.9 (17.5)
25.	Sad or frightened for most of the day	1.7 (8.5)	1.7 (9)	1.9 (8.5)
26.	Audible clamping or grinding of teeth	.1 (25.5)	.2 (23)	- (28)
27.	Fear of urinating or moving bowels	.1 (25.5)	- (27.5)	.2 (24.5)
28.	Inability to interact with strangers	1.7 (8.5)	1.7 (9)	1.2 (14)
29.	Unable to remain seated for long	6.1 (1)	6.4 (2)	7.4 (3)
30.	Cries when mother leaves	.9 (15.5)	1.2 (11.5)	.9 (17.5)
	Percent with no symptoms indicated	32.7	35.5	32.9

Note: (1) Numbers in parentheses indicate rank order in column. The Spearman rank correlation coefficient r_s between White and Negro is significant: $r_s = .89$, $t = 5.29$, $df = 28$, $p < .001$ (Reference 125).

EXHIBIT II-44 PSYCHOLOGICAL SCREENING PROCEDURE: TYPOLOGIES (NATIONWIDE SAMPLE)

Item Number	Description	Percent		
		Total	White	Negro
1.	The disruptive child	6.7 (1)(1)	5.6 (1)	8.8 (1)
2.	The provocative child	3.4 (5)	2.7 (7)	4.5 (3.5)
3.	The isolated child	3.7 (4)	4.0 (3)	4.0 (6)
4.	The fearful or tearful child	2.3 (8)	2.2 (8)	2.6 (8)
5.	The silent child	4.1 (2.5)	4.2 (2)	4.3 (5)
6.	The child who doesn't learn	3.1 (6)	3.2 (6)	3.6 (7)
7.	The child with separation problems	1.2 (9)	1.5 (9)	1.4 (9)
8.	The unhappy child	2.9 (7)	3.7 (4.5)	4.5 (3.5)
9.	The hyperactive child	4.1 (2.5)	3.7 (4.5)	5.0 (2)

Note: (1) Numbers in parentheses indicate rank order in column. The Spearman rank correlation coefficient (r_s) between White and Negro is significant: $r_s = .68$, $p < .05$.

EXHIBIT II-45 PSYCHOLOGICAL SCREENING PROCEDURE: REFERRALS

Referral/Treatment		Percentages		
		Total	White	Negro
1.	Child guidance clinic	.2 (4)(1)	-	.5 (2.5)
2.	Mental health center	-	-	-
3.	Public health nurse or physician	1.4 (1)	1.5 (1)	1.4 (1)
4.	Hospital/medical clinic	.5 (2.5)	.5 (3)	.2 (4)
5.	State school for mentally retarded	-	-	-
6.	Hospital for emotionally disturbed	-	-	-
7.	Foster home	-	-	-
8.	Home for dependent children	-	-	-
9.	Other	.5 (2.5)	.7 (2)	.5 (2.5)

Note: (1) Numbers in parentheses indicate rank order in column.

EXHIBIT II-46 PSYCHOLOGICAL SCREENING PROCEDURE: SYMPTOMS (BERLIN)(1)

Symptoms(2)		
Item Number	Description	Percent of Incidence (N=393)
19	Very anxious in new situations	17
1	Selfish or greedy hoarding (of own and other children's playthings or classroom materials)	12
12	Interested in only one or two objects or activities	12
22	Shows no interest in playing with or being accepted by children	10
29	Unable to remain seated for more than 5 minutes	10
13	Cries excessively or becomes very anxious or withdrawn when mildly reprimanded	6
28	Completely unable to interact with strangers	6
14.	Frequently wanders and runs away from nursery	4

Note: (1) See Reference 6.

(2) All other 22 symptoms were reported in 3 percent or less of the children.

EXHIBIT II-47 PSYCHOLOGICAL SCREENING PROCEDURE: TYPOLOGIES (BERLIN)

Item Number	Typologies for Behavior Syndromes	Percent of Incidence (N=393)
1	The disruptive child	13
3	The isolated child	9
5	The silent child	8
8	The unhappy child	8
2	The provocative child	8
9	The hyperactive child	7
4	The fearful or tearful child	5
6	The child who does not learn	3
7	The child with separation problems	2

matter. Dr. E. E. Van Egmond, Lesley College, stated in his report (Reference 105), which involved nine Head Start teachers:

> ...it is clear that culturally and economically deprived children presented unique learning and socialization needs. This is evident since all teachers commented about the children's characteristics with such remarks as: "The children do not know how to talk or what to talk about. They cannot really play together. These children cannot listen to a story when it is read to them, only when I tell it to them.... Sometimes the only thing you can do is stand close to them."

6. Socio-Cultural Characteristics

Most of the information available relating to a description of the Head Start children's social and socio-cultural background comes from the National Opinion Research Center (NORC) parent interviews. Some 1,742 parents of Head Start children were asked questions pertaining to their children's experiences and possessions. Exhibit II-48 shows (1) the results of the survey by indicating the percentage of parents responding in each answer-category and (2) items for which significant differences between white and Negro children (in Exhibits II-49 and II-50) were found.

Exhibit II-48 indicates that, with the notable exception of Sunday school, most of the Head Start children had not participated in any organized program for preschool children, prior to Head Start.

The large percentage of respondents indicating that their child was cared for during the day in the home by the mother is consistent with the finding (Exhibit II-17) that the majority of mothers were not employed outside the home.

A large percentage (60 percent) of children were reported to share their bedrooms with two or fewer children, and 80 percent were reported to share their bedrooms with no adult.

Nearly 75 percent of the children were reported to attend "religious services" at least once a month. There is some discrepancy between reported attendance at religious services (75 percent) and attendance at Sunday school (70 percent); it is possible that some of the attended churches have children's programs which are not labeled

EXHIBIT II-48 ACTIVITIES, HABITS AND ENVIRONMENT (TOTAL)

NORC Item Number		Percent(1)						Significant Differences (White vs. Negro)(2)
9.	Has child attended one of the following:	Yes	No	Don't Know				*
	A. Day care center	8	87	< 1				
	B. Summer camp	< 1	94	< 1				
	C. Settlement house program	1	93	< 1				
	D. Sunday school	70	28	-				*
	E. Other	10	63	-				
12.		One	Two	Three	Four	> Four	None	
	A. How many other children does child share his bedroom with?	35	25	12	6	3	17	
	B. How many adults does child share his bedroom with?	12	6	-	3	-	80	
16.	Who usually takes care of child during the day?	Father 3	Mother 66	Relative 19	Other 10			*
17.	Where is child usually taken care of?	Home 85	Nursery <1	Relative 6	Other 4	Don't Know -		*
23C.	Does child attend movies once or more a	Week 5	Month 16	3 Months 8	6 Months 14	Year 17	Never 38	*
24C.	Does child attend religious services once or more a	Week 56	Month 17	3 Months 8	6 Months 4	Year 2	Never 10	*
34A.	How many toys or games does child have?	Many 31	Some 27	Few 35	None 5	Don't Know -		*
34B.	How many books or magazines does child have?	Many 23	Some 28	Few 32	None 16	Don't Know -		*
34C.	How many crayons, paints, and paper does child have?	Many 25	Some 31	Few 27	None 16	Don't Know -		*

EXHIBIT II-48 (Continued)

NORC Item Numbers		Percent(1)					Significant Differences (White vs. Negro)(2)
35.	Has child ever had any pets?	Yes	No	Don't Know			
		65	34	-			
36.	How many times has child gone to the following:	Never	Once	Few	Many	Don't Know	
	A. Library	69	12	11	5	2	
	B. Supermarket	6	2	23	67	<1	
	C. Small grocery	3	1	20	75	-	
	D. Post office	44	12	27	15	1	
	E. Playground or park	18	7	29	45	<1	
	F. Zoo	43	28	21	6	<1	
	G. Airport or railroad station	42	31	19	6	<1	
	H. Fire station	50	33	11	3	1	
	I. Department store	9	4	38	46	<1	
	J. Parade, circus, or fair	18	15	44	20	<1	
	K. A restaurant	46	7	31	13	2	
	L. Beach, lake, or pool	25	10	36	27	<1	
	M. Ride in a car	2	<1	14	83	-	

Notes: (1) Total responses reflect all races in sample. Specific responses by race are tabulated separately only for white and Negro. Total N = 2,036, which is the weighted sample, not the actual number of parents cited in the text (see Appendix B).

(2) Asterisk indicates significant differences (see text).

EXHIBIT II-49 ACTIVITIES, HABITS AND ENVIRONMENT (WHITE)

NORC Item Numbers		Percent						
9.	Has child attended one of the following:	Yes	No	Don't Know				
	A. Day care center	3	94	1				
	B. Summer camp	<1	96	1				
	C. Settlement house program	1	95	1				
	D. Sunday school	61	38	-				
	E. Other	13	66	-				
12.		One	Two	Three	Four	Four	None	Don't Know
	A. How many other children does child share his bedroom with?	37	24	11	6	2	19	-
	B. How many adults does child share his bedroom with?	8	6	-	-	-	83	-
16.	Who usually takes care of child during the day?	Father	Mother	Relative	Other			
		5	75	10	10			
17.	Where is child usually taken care of?	Home	Nursery	Relative	Other	Don't Know		
		90	<1	3	3	-		
23C.	Does child attend movies once or more a	Week	Month	3 Months	6 Months	Year	Never	
		6	15	7	20	23	30	
24C.	Does child attend religious services once or more a	Week	Month	3 Months	6 Months	Year	Never	
		56	12	6	6	3	17	
34A.	How many toys or games does child have?	Many	Some	Few	None			
		39	31	28	3			
34B.	How many books or magazines does child have?	Many	Some	Few	None			
		29	31	26	15			
34C.	How many crayons, paints, and paper does child have?	Many	Some	Few	None			
		31	36	20	14			

EXHIBIT II-49 (Continued)

NORC Item Numbers		Percent				
		Yes	No	Don't Know		
35.	Has child ever had any pets?	78	21	-		
		Never	Once	Few	Many	Don't Know
36.	How many times has child gone to the following:					
	A. Library	76	7	10	5	1
	B. Supermarket	5	2	25	68	<1
	C. Small grocery	4	1	21	74	-
	D. Post office	44	5	30	18	1
	E. Playground or park	11	5	35	48	-
	F. Zoo	47	27	22	4	-
	G. Airport or railroad station	40	32	19	7	1
	H. Fire station	56	30	11	3	<1
	I. Department store	8	3	38	48	<1
	J. Parade, circus or fair	17	18	49	15	<1
	K. A restaurant	29	8	42	20	<1
	L. Beach, lake, or pool	15	7	38	40	-
	M. Ride in a car	1	<1	11	87	-

EXHIBIT II-50 ACTIVITIES, HABITS AND ENVIRONMENT (NEGRO)

NORC Item Numbers		Percent					
9.	Has child attended one of the following:	Yes	No	Don't Know			
	A. Day care center	13	82	-			
	B. Summer camp	1	93	-			
	C. Settlement house program	1	92	<1			
	D. Sunday school	79	20	-			
	E. Other	8	62	-			
12.		One	Two	Three	Four	Five	None
	A. How many other children does child share his bedroom with?	35	26	13	6	5	15
	B. How many adults does child share his bedroom with?	15	5	-	1	-	78
16.		Father	Mother	Relative	Other		
	Who usually takes care of child during the day?	2	60	27	11		
17.		Home	Nursery	Relative	Other	Don't Know	
	Where is child usually taken care of?	84	1	9	5	-	
23C.		Week	Month	3 Months	6 Months	Year	Never
	Does child attend movies once or more a	6	18	9	10	14	43
24C.		Week	Month	3 Months	6 Months	Year	Never
	Does child attend religious services once or more a	57	22	9	3	2	5
34A.		Many	Some	Few	None	Don't Know	
	How many toys or games does child have?	27	27	40	7	-	
34B.		Many	Some	Few	None	Don't Know	
	How many books or magazines does child have?	20	27	36	18	-	
34C.		Many	Some	Few	None	Don't Know	
	How many crayons, paints, and paper does child have?	20	29	33	18	-	

EXHIBIT II-50 (Continued)

NORC Item Number		Percent				
35.	Has child ever had any pets?	Yes	No	Don't Know		
		56	44	-		
36.	How many times has child gone to the following?	Never	Once	Few	Many	Don't Know
	A. Library	65	16	12	5	2
	B. Supermarket	6	2	25	67	<1
	C. Small grocery	2	1	20	77	-
	D. Post office	44	17	25	12	2
	E. Playground or park	23	7	26	43	<1
	F. Zoo	40	30	21	8	<1
	G. Airport or railroad station	43	31	19	5	<1
	H. Fire station	47	37	10	3	2
	I. Department store	10	5	40	45	<1
	J. Parade, circus, or fair	19	14	41	25	<1
	K. A restaurant	59	7	23	8	3
	L. Beach, lake, or pool	34	12	35	18	1
	M. Ride in a car	2	<1	16	82	<1

"Sunday school," thus accounting for the discrepancy, or that some churches have no children's program, so that the child attends services but not Sunday school or any children's religious program.

Although a large percentage of children (65 percent) had pets, a large percentage of children were reported to possess few or no (a) toys and games (40 percent), (b) books or magazines (48 percent), or (c) crayons, paints, and paper (43 percent), indicating some extent of "cultural disadvantage" or "experiential deficit" among children participating in Head Start.

In response to questions about places children have gone, the categories of riding in a car, to a small grocery store, to the supermarket, to a department store, and to a park or playground were listed by the largest percentages of parents (83, 75, 67, 46, and 45 percent, respectively). However, there were at least some Head Start children who were reported never to have been to the places listed (library, supermarket, small grocery, post office, playground-park, zoo, airport-railroad station, fire station, department store, parade-circus-fair, restaurant, beach-lake-pool, ride in car).

Although none of the independent studies described the children in terms similar to those used in the NORC survey, there was an interesting related observation in Dr. Allen Soule's report on Northfield, Vermont (Reference 99). Not only had many of the 48 Northfield Head Start children never been swimming, but also "some of the parents had never even seen the pool and playground, which was a real eye-opener since most of Northfield's children spent the biggest part of their summer days there."

In addition to the overall tabulations shown in Exhibit II-48, the results for the same items were tabulated for white and Negro children, to permit comparisons between the two races on items relating to children's environment and activities. These results are summarized in Exhibits II-49 and II-50, but the indication of significance between white and Negro is noted by an asterisk (*) in Exhibit II-48.

There are a number of items for which significant differences appear to exist. Negro children attend a day-care center and a Sunday school more often than white children. More white children are usually taken care of by their mothers at home than Negro children. More Negro children have never seen a movie. Negro children have fewer toys and games, books and magazines, crayons and paints, and pets. More white children have never been to a library, zoo, or fire station, while more Negro children have never been to a restaurant. More white children have been on car rides, but fewer white children have been to a circus or parade.

Some information concerning the language environment (bilinguality) of the Head Start children was obtained from the 1,742 respondents to the NORC survey. Exhibit II-51 summarizes the available information. The exhibit indicates that about 12 percent of the children in the NORC sample of 1,742 families came from homes where some language other than English was spoken. Spanish was the predominant "other language" (6.65 percent), and French ranked second (4.53 percent).

EXHIBIT II-51 LINGUAL BACKGROUND

Language Spoken	Number of Homes	Percent
Spanish	116	6.65
French	79	4.53
Italian	12	.68
German	8	.46
Swedish	3	.17
Portuguese	3	.17
Japanese	2	.11
Chinese	2	.11
Greek	1	.06
Other	10	.57
Total	236	12.40

D. Head Start Parents and Families

Some basic descriptive information about parents and families obtained from the Head Start medical/dental form was presented in Exhibits II-14, II-16, and II-17, regarding "Family Income," "Mother's Education," and "Does Mother Work?", respectively. Exhibits II-52 and II-53 summarize additional descriptive information relating specifically to Head Start mothers and fathers (total sample: Exhibit II-52), and to Negro and white mothers and fathers, taken separately by race (Exhibit II-53). Information for Exhibits II-52 and II-53 was obtained from the OEO Information Center's tabulations of the 1-percent sample of medical/dental forms (see Appendix A for a copy of this form).

Inspection of Exhibit II-52 shows that, for all seven of the applicable items for fathers,[1] at least 25 percent of the information was reported as unknown. The large amount of "unknown" information for fathers may be related to the fact that 70 percent of the parent respondents to the medical/dental form were mothers. This high percentage of unobtained information makes it difficult to get an accurate picture of family history as it related to Head Start fathers. Reported information does indicate that about 40 percent of the fathers had at least 9 years of education. At least 58 percent usually work (34 percent unknown), with most (60 percent) working full-time. The category of work most frequently reported was laborer (32 percent). Slightly more than 50 percent reported that they had not been unemployed within the past year.

All 10 items were applicable to the mothers; for 2 items, at least 50 percent of the information was not reported, and for 2 items at least 90 percent was reported "unknown" (items related to work, unemployment, and marital status, if not married).

Reported information indicates that about 50 percent of the mothers had at least 9 years of school (20 percent were high school graduates). About 50 percent had four or more living children. About 10 percent worked full-time, and another 10 percent worked part-time.

---

[1] Full-term pregnancies, number of living children, and marital status (if not married) were considered not applicable.

EXHIBIT II-52 FAMILY HISTORY: PARENTS (TOTAL)(1)

Medical/Dental Item Number		Percent	
		Father	Mother
77, 86	Parents deceased		
	Yes	3.2	1.3
	No	72.1	79.6
	Unknown	24.6	19.1
79, 88	Level of education		
	None	1.7	1.5
	1 to 6 years	14.9	12.3
	7 to 8 years	16.6	16.4
	9 to 11 years	22.6	33.0
	High school graduate	16.0	19.8
	Any college	1.7	1.4
	Unknown	26.5	15.6
80	Full term pregnancies		
	1 to 3		31.9
	4 to 6		33.2
	7 to 9		13.8
	Over 9		6.2
	Unknown		14.8
	Number of children living		
	1 to 3		32.4
	4 to 6		34.9
	7 to 9		13.3
	Over 9		4.5
	Unknown		15.0
81A, 89A	Parent usually works		
	Yes	57.9	28.3
	No	7.6	54.2
	Unknown	34.5	17.5

EXHIBIT II-52 (Continued)

Medical/Dental Item Number		Parent: Father	Parent: Mother
81B, 89B	If yes, works		
	Full-time	60.4	9.4
	Part-time	5.3	10.0
	Occasionally	.9	3.6
	Unknown	33.3	67.0
81D, 89C	If yes, type of work		
	Professional/ technical/ managerial	6.3	3.0
	Clerical/sales	3.2	3.5
	Craftsman/ foreman/ operative	14.2	2.6
	Service/private household	4.6	13.3
	Farmer	3.2	.9
	Laborer	32.3	7.2
	Student	.2	.1
	Unknown	36.0	69.4
82, 90	Parent without job in past year		
	Yes	13.4	10.7
	No	51.5	46.7
	Unknown	35.1	42.6
83, 91	Unemployed for		
	2 months or less	4.6	2.3
	3 to 6 months	5.2	3.6
	7 to 9 months	1.3	1.7
	10 to 12 months	1.2	2.1
	Unknown	87.7	90.4

EXHIBIT II-52 (Continued)

Medical/Dental Item Number		Parent	
		Father	Mother
78, 87	Parent is		
	Widowed		.2
	Divorced		.9
	Separated		1.6
	Other		1.3
	Unknown		96.0

Note: (1) N = 6309.

EXHIBIT II-53 FAMILY HISTORY: PARENT (WHITE-NEGRO)

Medical/Dental Item Number		Percent			
		White		Negro	
		Father	Mother	Father	Mother
77, 86	Parents deceased				
	Yes	3	1	4	2
	No	78	83	69	78
	Unknown	19	16	27	20
79, 88	Level of education				
	None	2	2	1	<1
	1 to 6 years	16	14	14	8
	7 to 8 years	20	19	15	15
	9 to 11 years	25	28	23	41
	High school graduate	17	22	18	21
	Any college	2	1	2	2
	Unknown	19	14	28	12
80	Full term pregnancies				
	1 to 3		38		27
	4 to 6		34		35
	7 to 9		10		19
	Over 9		5		7
	Unknown		13		12
	Number of children living				
	1 to 3		39		27
	4 to 6		35		37
	7 to 9		10		17
	Over 9		4		5
	Unknown		12		14
81A, 89A	Parent usually works				
	Yes	62	20	55	40
	No	10	66	6	43
	Unknown	28	14	38	17

EXHIBIT II-53 (Continued)

Medical/Dental Item Number		Percent			
		White		Negro	
		Father	Mother	Father	Mother
81B, 89B	If yes, works				
	Full-time	66	14	57	26
	Part-time	7	7	4	15
	Occasionally	1	3	1	5
	Unknown	27	76	38	54
81D, 89C	If yes, type of work				
	Professional/ technical/ managerial	8	3	5	3
	Clerical/sales	4	5	2	3
	Craftsman/ foreman/ operative	19	4	11	2
	Service/ private household	2	4	7	24
	Farmer	4	<1	3	2
	Laborer	32	7	33	8
	Student	<1	-	<1	<1
	Unknown	30	78	40	58
82, 90	Parent without job in past year				
	Yes	16	6	12	16
	No	54	46	52	51
	Unknown	30	48	36	33
83, 91	Unemployed for				
	2 months or less	5	1	5	3
	3 to 6 months	7	2	4	6
	7 to 9 months	2	1	1	3
	10 to 12 months	1	1	1	3
	Unknown	86	95	89	85

EXHIBIT II-53 (Continued)

Medical/Dental Item Number		Percent			
		White		Negro	
		Father	Mother	Father	Mother
78, 87	Parent is				
	Widowed	-	<1	-	<1
	Divorced	-	1	-	1
	Separated	-	1	-	2
	Other	-	1	-	2
	Unknown	-	97	-	95

One local study, that of Dunbar Center in Syracuse, New York (Reference 113), has described 45 of 46 families participating in that center's Head Start program. The report is particularly interesting, because many of the factors listed previously in this section are interrelated to present a more composite picture of the family characteristics of the Head Start children.

The researcher, Roslyn Gerard, suggests that there are four distinct groups represented among these families: the 1-parent family, the 2-parent family whose father is disabled and is receiving total welfare assistance, the large 2-parent family whose head is employed but whose pay is insufficient to support the family, and the large self-sufficient family with both parents working but needing some community assistance.

Forty-one percent (19) of the participating families were 1-parent families, all headed by the mother. Gerard states that "the level of functioning is low and these families appear to have unmet needs in all areas of life." Only two of these families received their entire income from employment.[1] These mothers were usually younger than parents of 2-parent families. In these families, the mothers' educational level was lower than that of the mothers of 2-parent families. The educational level was particularly low for those mothers supported entirely from welfare assistance. Housing tended to be poorer for these families than for 2-parent families.

There were two 2-parent families (9 percent of total) with the breadwinner incapacitated and supported entirely by welfare. Gerard observed that they were similar in many ways to the 1-parent families, in that the fathers appeared to have abandoned the dominant male role of head of the family. Older sons had been involved with the law. Both families had school drop-outs.

The third family type was the large family in which the head of the family could entirely support his family. In most cases, the mother did not work outside the home, but in the two families where she did, her skill level and income were extremely low. It was indicated that the older children in these families were lower in achievement than their peers. Most of the families had at least one child who had not been promoted every year. Unlike the first two groups, the children had had no serious problems with the police.

---

[1] This compares with 13 of the 26 2-parent families.

The last family group was the homeowners, with both the mother and father employed. These families were large, and Gerard states that the child's principal need was "...a pre-school experience because working mothers have difficulties in spending sufficient time necessary to stimulate the child's interest in the world about him."

The discussion above is but a summary of a rather intensive study of these 45 families, in which their characteristics are presented in the context of the community in which they live. It serves to highlight different types of families with varying priorities of need for Head Start.

Further information, primarily descriptive of the parents from a socio-cultural point of view, was obtained through the NORC interview survey of 1,742 Head Start parents (see description of sample in Section II. F). Exhibits II-54 and II-57 summarize in percentages the overall NORC data relevant to Head Start parents. In addition to the overall tabulations made for the NORC parent-description items, comparisons for Negro and white mothers and Negro and white fathers were made. (See Exhibits II-55 and II-56 for white and Negro mothers, and II-58 and II-59 for white and Negro fathers.) Tests of significance of difference in proportions were made between races for the parents. Items that differed at the 5-percent level are indicated by asterisks (*) on Exhibits II-54 and II-57 (see Appendix B for statistical analysis procedures for all NORC white versus Negro comparisons in this report).

The habits and activities of Negro and white mothers can be compared in Exhibit II-55 and II-56. The results are that for all but three of the significant items, the white mothers engage in the activity more frequently than the Negro mothers. Thus, for example, white mothers are more likely to go to movies, visit, entertain, take trips, go to restaurants, picnic, play cards, and have a hobby, while Negro mothers, in their spare time, are more likely to belong to clubs, engage in some kind of musical activity, or just sit and relax.

EXHIBIT II-54 DESCRIPTION OF MOTHERS (TOTAL)

NORC Item Number		Percent							Significant Difference (White vs. Negro)[1]
19.	Does she belong to any clubs?	yes	no						*
		36	62						
	A. If yes, does she attend once or more a ____?	week	month	occas					
		14	9	12					
23A.	Does she attend movies once or more a ____?	week	month	3 mos.	6 mos.	year	never	DK	*
		3	12	5	13	21	43	-	
24A.	Does she attend religious services once or more a ____?	week	month	3 mos.	6 mos.	year	never	DK	
		45	21	10	7	5	10	0	
25A.	Does she read a newspaper once or more a ____?	day	2 days	week	weeks	DK			
		59	8	13	15	-			
26.	Does she do one of the following once or more a ____?	week	2 wks.	month	3 mos.	never			
	A. Go to a sports event	6	6	6	19	62			
	B. Take part in sports event	3	2	2	5	87			
	C. Read a book or magazine	54	12	11	9	13			
	D. Go to see friends or relatives	68	14	10	7	4			*
	E. Entertain friends or relatives at home	67	14	8	6	4			*
	F. Eat in a restaurant	11	8	12	24	43			*
	G. Go to a concert, play, or museum	<1	1	4	23	70			*
	H. Go on a picnic, ride, or swimming	31	16	13	19	20			*
	I. Meet and talk with friends on the street	79	6	5	4	6			
28.	Was she registered to vote last November?	yes	no	DK					
		60	39						
	A. If yes, did she vote?	52	4	<1					
30.	Has she taken a trip outside the city in a	yes	no						*
	A. Car	83	12						*
	B. Bus	58	[illegible]						*
	C. Train	41	52						
	D. Airplane	9	82						*
	E. Boat	12	78						
31A.	How many trips of over 50 miles has she made during the last year?	None	one	two	three	four	>four		*
		30	28	12	8	6	21		
32.	Which of the following things does she do in her spare time	yes	no						*
	A. Sit and relax	79	18						
	B. Grow flowers or vegetables	51	46						
	C. Sew	70	27						*
	D. Play a musical instrument or sing	18	79						*
	E. Play cards or other games	47	50						*
	F. Other special things	31	60						

Note: (1) Asterisk (*) indicates significant differences (see text).

EXHIBIT II-55 DESCRIPTION OF MOTHERS (WHITE)

NORC Item Number		Percent						
19.	Does she belong to any clubs?	yes	no					
		29	69					
	A. If yes, does she attend once or more a _____?	week	month	occas.				
		7	5	16				
23A.	Does she attend movies once or more a _____?	week	month	3 mos.	6 mos.	year	never	DK
		3	11	5	17	27	33	-
24A.	Does she attend religious services once or more a _____?	week	month	3 mos.	6 mos.	year	never	DK
		44	12	8	10	6	17	-
25A.	Does she read a newspaper once or more a _____?	day	2 days	week	weeks	DK		
		61	7	15	12	-		
26.	Does she do one of the following once or more a _____?	week	2 wks.	month	3 mos.	never		
	A. Go to a sports event	6	5	4	20	64		
	B. Take part in sports event	3	2	1	6	8[illegible]		
	C. Read a book or magazine	53	10	13	8	16		
	D. Go to see friends or relatives	73	10	7	4	5		
	E. Entertain friends or relatives at home	71	11	8	5	4		
	F. Eat in a restaurant	12	12	17	31	28		
	G. Go to a concert, play, or museum	<1	1	1	20	77		
	H. Go on a picnic, ride, or swimming	43	18	14	15	10		
	I. Meet and talk with friends on the street	77	6	6	3	7		
28.	Was she registered to vote last November?	yes	no	DK				
		57	40					
	A. If yes, did she vote?	50	4	1				
30.	Has she taken a trip outside the city in a	yes	no					
	A. Car	91	5					
	B. Bus	55	4[illegible]					
	C. Train	38	59					
	D. Airplane	16	80					
	E. Boat	21	74					
31A.	How many trips of over 50 miles has she made during the last year?	None	one	two	three	four	>four	
		21	16	10	10	8	33	
32.	Which of the following things does she do in her spare time	yes	no					
	A. Sit and relax	76	22					
	B. Grow flowers or vegetables	53	44					
	C. Sew	70	28					
	D. Play a musical instrument or sing	13	84					
	E. Play cards or other games	57	41					
	F. Other special things	39	56					

EXHIBIT II-56 DESCRIPTION OF MOTHERS (NEGRO)

NORC Item Number		Percent						
19.	Does she belong to any clubs?	yes	no					
		42	47					
	A. If yes, does she attend once or more a _____?	week	month	occas.				
		19	12	11				
23A.	Does she attend movies once or more a _____?	week	month	3 mos.	6 mos.	year	never	DK
		3	15	6	10	17	48	-
24A.	Does she attend religious services once or more a _____?	week	month	3 mos.	6 mos.	year	never	DK
		45	28	12	5	4	4	-
25A.	Does she read a newspaper once or more a _____?	day	2 days	week	weeks	DK		
		59	9	11	17	-		
26.	Does she do one of the following once or more a _____?	week	2 wks.	month	3 mos.	never		
	A. Go to a sports event	5	6	8	21	60		
	B. Take part in sports event	4	2	2	5	87		
	C. Read a book or magazine	55	13	11	9	12		
	D. Go to see friends or relatives	65	15	10	7	2		
	E. Entertain friends or relatives at home	65	16	9	8	3		
	F. Eat in a restaurant	9	6	9	20	55		
	G. Go to a concert, play, or museum	<1	2	6	26	65		
	H. Go on a picnic, ride, or swimming	23	15	12	22	27		
	I. Meet and talk with friends on the street	81	7	4	4	4		
28.	Was she registered to vote last November?	yes	no	DK				
		60	39	-				
	A. If yes, did she vote?	55	5	<1				
30.	Has she taken a trip outside the city in a	yes	no					
	A. Car	79	17					
	B. Bus	61	31					
	C. Train	45	48					
	D. Airplane	4	84					
	E. Boat	5	83					
31A.	How many trips of over 50 miles has she made during the last year?	None	one	two	three	four	>four	
		38	23	14	7	5	13	
32.	Which of the following things does she do in her spare time	yes	no					
	A. Sit and relax	83	16					
	B. Grow flowers or vegetables	50	48					
	C. Sew	70	28					
	D. Play a musical instrument or sing	22	76					
	E. Play cards or other games	40	58					
	F. Other special things	26	64					

EXHIBIT II-57 DESCRIPTION OF FATHERS (TOTAL)

NORC Item Number		Percent							Significant Differences (White vs. Negro)[1]
20.	Does he belong to any clubs?	yes 28	no 47						
	A. If yes, does he attend once or more a _____?	week 7	month 6	occas. 13					
23B.	Does he attend movies once or more a _____?	week 2	month 8	3 mos. 4	6 mos. 9	year 17	never 33	DK <1	*
24B.	Does he attend religious services once or more a _____?	week 28	month 11	3 mos. 7	6 mos. 7	year 4	never 16	DK 1	
25B.	Does he read a newspaper once or more a _____?	day 45	2 days 5	week 8	wks 12	DK 3			*
27.	Does he do one of the following once or more a _____?	week	2 wks.	month	3 mos.	never			
	A. Go to a sports event	9	8	6	16	59			
	B. Take part in a sports event	6	3	3	5	80			
	C. Read a book or magazine	33	7	7	8	43			*
	D. Go to see friends or relatives	49	9	7	5	27			*
	E. Entertain friends or relatives at home	48	9	8	5	27			*
	F. Eat in a restaurant	15	6	8	15	53			*
	G. Go to a concert, play or museum	<1	1	3	12	81			
	H. Go on a picnic, ride or swimming	27	11	8	12	39			*
	I. Meet and talk with friends on the street	62	4	2	2	29			*
29.	Was he registered to vote last November?	yes 51	no 22	DK					*
	A. If yes, did he vote?	46	3	1					
31B.	How many trips of over 50 miles has he made during the last year?	none 42	one 12	two 9	three 7	four 5	> four 22		*
33.	Which of the following things does he do in his spare time:	yes	no						
	A. Fish or hunt	47	27						*
	B. Work with cars or tinker with things	52	21						*
	C. Sit and relax	58	11						*
	D. Play cards or other games	44	29						*
	E. Do carpentry just for himself	43	30						*
	F. Play a musical instrument or sing with a choir	12	60						*
	G. Grow flowers or vegetables	28	45						
	H. Other special things	19	49						*

Note: (1) Asterisk (*) indicates significant differences.

EXHIBIT II-58 DESCRIPTION OF FATHERS (WHITE)

NORC Item Number		Percent						
20.	Does he belong to any clubs?	yes	no					
		32	49					
	A. If yes, does he attend once or more a _____?	week	month	occas.				
		6	4	22				
23B.	Does he attend movies once or more a _____?	week	month	3 mos.	6 mos.	year	never	DK
		3	7	5	13	23	30	<1
24B.	Does he attend religious services once or more a _____?	week	month	3 mos.	6 mos.	year	never	DK
		29	7	7	10	6	23	-
25B.	Does he read a newspaper once or more a _____?	day	2 days	week	wks	DK		
		53	5	11	10	1		
27.	Does he do one of the following once or more a _____?	week	2 wks.	month	3 mos.	never		
	A. Go to a sports event	8	9	6	18	58		
	B. Take part in a sports event	6	5	3	4	81		
	C. Read a book or magazine	43	7	7	8	33		
	D. Go to see friends or relatives	58	6	8	6	21		
	E. Entertain friends or relatives at home	57	8	8	7	19		
	F. Eat in a restaurant	21	8	14	24	33		
	G. Go to a concert, play or museum	<1	<1	1	14	84		
	H. Go on a picnic, ride or swimming	38	14	10	10	27		
	I. Meet and talk with friends on the street	68	4	2	2	22		
29.	Was he registered to vote last November?	yes	no	DK				
		56	24	-				
	A. If yes, did he vote?	48	6	2				
31B.	How many trips of over 50 miles has he made during the last year?	none	one	wo	three	four	> four	
		30	10	10	8	7	35	
33.	Which of the following things does he do in his spare time:	yes	no					
	A. Fish or hunt	56	26					
	B. Work with cars or tinker with things	59	23					
	C. Sit and relax	67	14					
	D. Play cards or other games	53	29					
	E. Do carpentry just for himself	48	33					
	F. Play a musical instrument or sing with a choir	14	66					
	G. Grow flowers or vegetables	34	47					
	H. Other special things	26	53					

EXHIBIT II-59 DESCRIPTION OF FATHERS (NEGRO)

	NORC Item Number	Percent						
20.	Does he belong to any clubs?	yes	no					
		24	46					
	A. If yes, does he attend once or more a _____?	week	month	occas.				
		9	8	7				
23B.	Does he attend movies once or more a _____?	week	month	3 mos.	6 mos.	year	never	DK
		2	8	5	7	12	35	<1
24B.	Does he attend religious services once or more a _____?	week	month	3 mos.	6 mos.	year	never	DK
		26	14	7	6	3	12	1
25B.	Does he read a newspaper once or more a _____?	day	2 days	week	wks	DK		
		38	5	7	14	4		
27.	Does he do one of the following once or more a _____?	week	2 wks	month	3 mos.	never		
	A. Go to a sports event	10	8	7	15	60		
	B. Take part in a sports event	6	3	2	6	82		
	C. Read a book or magazine	27	7	7	8	51		
	D. Go to see friends or relatives	43	11	7	6	33		
	E. Entertain friends or relatives at home	43	10	8	5	69		
	F. Eat in a restaurant	12	4	5	9	89		
	G. Go to a concert, play or museum	1	2	4	12	51		
	H. Go on a picnic, ride or swimming	20	9	7	13	51		
	I. Meet and talk with friends on the street	57	4	2	3	35		
29.	Was he registered to vote last November?	yes	no	DK				
		48	20					
	A. If yes, did he vote?	44	2	1				
31B.	How many trips of over 50 miles has he made during the last year?	none	one	two	three	four	> four	
		53	14	9	6	3	14	
33.	Which of the following things does he do in his spare time:	yes	no					
	A. Fish or hunt	40	28	<1				
	B. Work with cars or tinker with things	48	20	1				
	C. Sit and relax	61	8	<1				
	D. Play cards or other games	38	30	1				
	E. Do carpentry just for himself	39	30	<1				
	F. Play a musical instrument or sing with a choir	11	57	1				
	G. Grow flowers or vegetables	25	43	<1				
	H. Other special things	15	46	3				

There were no significant differences for regular church attendance (about 45 percent for both groups), meeting and talking with friends (about 80 percent for both groups), sewing (70 percent for both groups), and reading daily newspapers (about 60 percent for both groups).

The habits and activities of Negro and white fathers can be compared in Exhibits II-58 and II-59. Items in which the differences in proportions were significant are again indicated by asterisks (*) in Exhibit II-57. The results are that in each of the significant items, the white fathers engage in the activity indicated by the item more frequently than the Negro fathers. Thus, for example, they read a newspaper more, eat out more, and have more picnics. They are more likely than Negro fathers to vote, take trips, hunt and fish, play a musical instrument or sing with a choir, play cards, or just sit and relax. There are no significant differences between the subgroups in belonging to clubs (the majority of those answering the item do not), in going to the movies (the majority go two or three times a year or less), and attendance at church.

Examination of results of comparisons between white and Negro fathers and results of comparisons between white and Negro mothers on essentially the same items reveals some interesting differences and similarities. For example, Negro mothers are more likely to belong to a club or organization than white mothers and less likely to go to the movies than white mothers, while the fathers do not differ significantly in these activities. There are no significant differences in voting rate between mothers, while there are such differences between fathers.

Exhibits II-60 and II-61 summarize some additional descriptive information for Head Start families that was obtained from the 1-percent sample (Medical/Dental Form). The information was obtained primarly from mothers (70 percent).

According to Exhibit II-60, nearly 62 percent of the children were cared for during the day by a parent; this figure corroborates figures concerning incidence of working mothers (Exhibit II-17). The finding that about 65 percent of the families were not receiving public assistance

EXHIBIT II-60 DESCRIPTION OF FAMILIES (TOTAL)

Medical/Dental Item Number		Percent
92	Public assistance/ADC payments in past year	
	Yes	16.1
	No	64.8
	Unknown	19.1
94	Care of Head Start child during day	
	Parent	61.8
	Nursery school	2.2
	Babysitter	5.1
	Sibling	2.2
	Other adult relative	12.6
	Other	2.1
	Unknown	14.0
95	Number of people in household	
	4 or less	8.1
	5 to 7	46.0
	8 to 10	21.0
	Over 10	6.9
	Unknown	17.9
96	Number of children under 16	
	1 to 2	27.0
	3 to 5	43.5
	6 to 8	17.8
	Over 8	3.7
	Unknown	8.0

EXHIBIT II-60 (Continued)

Medical/Dental Item Number			Percent
98	Respondents		
		Mother and father	7.1
		Mother	70.0
		Father	3.9
		Guardian	1.9
		Foster parent	.6
		Other	8.2
		Unknown	8.4

EXHIBIT II-61 DESCRIPTION OF FAMILIES

Medical/Dental Item Number			White (Percent)	Negro (Percent)
92	Public assistance/ADC payments in past year			
		Yes	12	20
		No	70	64
		Unknown	18	16
94	Care of Head Start child during day			
		Parent	72	51
		Nursery school	1	4
		Babysitter	5	6
		Sibling	2	3
		Other adult relative	8	19
		Other	1	3
		Unknown	11	14
95	Number of people in household			
		4 or less	6	7
		5 to 7	49	44
		8 to 10	17	26
		Over 10	5	8
		Unknown	22	15

EXHIBIT II-61 (Continued)

Medical/Dental Item Number			White (Percent)	Negro (Percent)
96	Number of children under 16			
		1 to 2	32	24
		3 to 5	46	42
		6 to 8	14	22
		Over 8	3	4
		Unknown	6	7
98	Respondents			
		Mother and father	8	7
		Mother	71	70
		Father	5	3
		Guardian	2	2
		Foster parent	<1	<1
		Other	7	10
		Unknown	7	8

or Aid to Dependent Children (ADC) would appear to support the possibility that children whose mothers were on ADC did not participate to a large extent in Head Start.

From the NORC survey, certain information descriptive of the socio-cultural environment has been summarized in Exhibit II-62.

In addition to the overall tabulations for "family-environment" items, comparisons were made for Negro and white respondents. Response percentages for these items for the two races are shown in Exhibits II-63 and II-64.

Of these items, two were found to be significant as a result of the tests of significance between differences in proportions: (1) more Negro than white families rent their homes, and (2) more Negroes have lived longer at their present homes than whites.

A final independent study (Reference 16) pertinent here compared social activities and attitudes of 40 Head Start and 40 non-Head Start families in Negro neighborhoods of Rochester, New York, served by Head Start. The purpose of the study was to assess the cultural deprivation[1] of these groups of families, perhaps discovering if there were any patterns to participation or nonparticipation in the program. The authors believed that Head Start did not reach the most culturally deprived families in the areas served. Data were collected by interview. Some of the factors investigated were: (1) attitudes of the family toward the police, political parties, church, and the anti-poverty programs such as Head Start; (2) how the families found out about Head Start; (3) socialization; (4) education; (5) health; (6) financial status; and (7) family status.

---

[1] Defined by the researchers as "...lacking opportunities, or being blocked from opportunities, to have social experiences that are common to the people of the dominant society. It will also mean having certain attitudes toward these social experiences and certain expectations regarding the self, others, and social institutions, which may perpetrate the social conditions which deny to the person experiences otherwise available to members of the dominant group."

EXHIBIT II-62 FAMILY HABITS (TOTAL)(1)

NORC Item Number		Percent						Significant Difference (White vs. Negro)
10	Own or rent?	Own 39	Rent 54	Other 5				*
10A	If rent, part of public housing?	Yes 8	No 51					
11	How many rooms?	One <1	Two 1	Three 9	Four 24	Five 26	>Five 35	*
13	How long in present home? Up to:	<6 Mos. 10	1 Yr. 9	2 Yrs. 12	3 Yrs. 11	5 Yrs. 18	>Five 36	*
13A	If less than 2 years, number of moves?	One 18	Two 10	Three 3	Four <1	> Four <1	>Eight -	
14	Was the last move from same______?	Neighborhood 40	City 39	State 11	Other 5			*
21	Do you have a radio?	Yes 88	No 11					
21A	If yes, how many hours a day is it on?	<One 9	One 13	2-3 28	4-7 21	>Eight 14	Never 2	
21B	Who usually listens?	Respondent 2	Husband 42	Child 48	Other 53			
22	Do you have a TV set?	Yes 89	No 9					
22A	If yes, how many hours a day is it on?	<One 1	One 1	2-3 16	4-7 42	>Eight 27	Never <1	
22B	Who usually listens?	Respondent 77	Husband 58	Child 82	Other 79			

Note: (1) N = 2,036 (weighted).

EXHIBIT II-63 FAMILY HABITS (WHITE)[1]

NORC Item Number		Percent					
10	Own or rent?	Own 46	Rent 45	Other 7			
10A	If rent, part of public housing?	Yes 5	No 46				
11	How many rooms?	One 1	Two 2	Three 4	Four 22	Five 28	>Five 38
13	How long in present home? Up to:	6 Mos. 13	1 Yr. 11	2 Yrs. 14	3 Yrs. 10	5 Yrs. 17	>5 Yrs. 32
13A	If less than 2 years, number of moves?	One 17	Two 16	Three 4	Four 1	>Four <1	>Eight <1
14	Was the last move from the same______?	Neighborhood 34	City 40	State 19	Other 5		
21	Do you have a radio?	Yes 91	No 8				
21A	If yes, how many hours a day is it on?	<One 10	One 18	2-3 27	4-7 18	>Eight 15	Never 3
21B	Who usually listens?	Respondent 2	Husband 47	Child 39	Other 44		
22	Do you have a TV set?	Yes 91	No 6				
22A	If yes, how many hours a day is it on?	<One 1	One 2	2-3 21	4-7 44	>Eight 25	Never <1
22B	Who usually listens?	Respondent 82	Husband 67	Child 88	Other 83		

Note: (1) N = 832.

EXHIBIT II-64 FAMILY HABITS (NEGRO)[1]

NORC Item Number		Percent					
10	Own or rent?	Own 36	Rent 60	Other 3			
10A	If rent, part of public housing?	Yes 10	No 55				
11	How many rooms?	One <1	Two 2	Three 13	Four 26	Five 25	>Five 33
13	How long in present home? Up to:	<6 Mos. 9	1 Yr. 8	2 Yrs. 12	3 Yrs. 12	5 Yrs. 19	>10 Yrs. 39
13A	If less than two years, number of moves?	One 19	Two 7	Three 2	Four <1	>Four <1	>Eight -
14	Was the last move from the same______?	Neighborhood 45	City 40	State 7	Other 5		
21	Do you have a radio?	Yes 87	No 13				
21A	If yes, how many hours a day is it on?	<One 8	One 9	2-3 30	4-7 23	>Eight 14	Never 2
21B	Who usually listens?	Respondent 3	Husband 39	Child 55	Other 59		
22	Do you have a TV set?	Yes 88	No 11				
22A	If yes, how many hours a day is it on?	<One <1	One <1	2-3 14	4-7 42	>Eight 29	Never <1
22B	Who usually listens?	Respondent 76	Husband 51	Child 78	Other 77		

Note: (1) N = 1,129 (weighted).

In general, it would appear that the Head Start families had somewhat more positive attitudes toward the community's various institutions. While more Head Start families considered the police to be helpful or friendly, however, almost every child in the program expressed negative attitudes. There were insignificant differences between the two groups with regard to political parties (both were indifferent) and church, but Head Start families were more positive about social programs such as Head Start. Almost all of both groups saw their future as "better," but they were also pessimistic about leaving the "ghetto." The researchers conclude that inasmuch as there were no differences between the groups concerning expectations for the future, Head Start "...had no real effect in raising hopes for a better life...."

Looking to the ways in which families found out about Head Start, it is interesting that one-third of the nonparticipating group had not heard about the program--this despite an intensive recruiting campaign. The researchers suggest that inasmuch as every family could have heard of Head Start, this might be an additional piece of evidence to suggest that cultural deprivation "...is characterized by non-involvement in the institutions of the society, including the communications institutions and processes."

It was observed that in terms of socialization, Head Start families participated more in the various community programs such as the church, lodge, school, and settlement houses than did non-Head Start families. In addition, Head Start families tended to participate more frequently in personally initiated social activities. Only slightly more than half the non-Head Start group had any reported social life.

The investigators found that both Head Start mothers and fathers had a higher level of education than the nonparticipators. No marked differences were shown in the family health of the two groups. Interestingly, more Head Start families received some type of welfare assistance. However, proportionately more Head Start fathers worked and brought money home than did non-Head Start fathers.

Looking at family status, 82 percent of the Head Start families were "whole" (mother and father together and married), as compared with 58 percent of the non-Head Start group. Fifteen percent of the non-Head Start group were separated or divorced, while 11 percent of the Head Start families showed this condition. Nine percent of the nonparticipating families had a deceased parent; only 4 percent of the participators had a deceased parent. Finally, while 18 percent of the non-Head Start parents had common law marriages, only 4 percent of the Head Start group were so married.

The investigators conclude that the Head Start program in Rochester did not reach some of the more severely culturally deprived families probably because their greater isolation and/or insulation from the community, financial vulnerability, and pessimism made them less responsive to such programs.

E. Head Start CDC Staff and Workers

In the Summer 1965 program there were approximately 184,000 CDC staff members,[1] 47 percent paid and 53 percent volunteer. The four types of staff members and their approximate numbers were:

- Paid professionals, 41,000
- Paid neighborhood residents, 46,000
- Volunteer neighborhood residents, 56,000
- Other volunteers, 41,000

Personnel working in these various categories included teachers, teachers acting as aides, psychologists, social workers, volunteer women with varying degrees of training and experience, nurses, students from the Neighborhood Youth Corps, school principals, physicians and dentists, parents of participating children, and numerous other specialists and nonspecialists.

In this subsection the total staff member population, then more specifically the teachers and the subprofessionals, will be described in terms of selected characteristics, their relevant experience, and their Head Start interest. This will be followed by a discussion of teacher styles and attitudes and information on the classroom duties of the subprofessionals.

There are several reasons for describing various characteristics of staff and workers who manned the CDC's. They were, in the first place, a major class of participants in the program. They performed the many diversified functions associated with the operation of a comprehensive program. Second, it was a Head Start objective to enlist the interest of many different types of people, with diversified skills, backgrounds, ages, and capabilities, in recognizing and dealing with the complex and widespread problem of the growth and development of culturally disadvantaged children and with the many factors that affect their progress. Third, there is the fact that the various workers, whether they are teachers, physicians, artists, housewives, teenagers, bus drivers, secretaries, or whatever, are in one way or another participants in the system and the environment in which the children are growing up, Head Start or no Head Start. As participants, their behavior or actions, as stimuli, may potentially be inappropriate, irrelevant, or even harmful to the development of the children, despite the best of intentions. Thus, in one sense, while the workers can be regarded as teachers--fixed resources with services and activities to provide to the children--in another sense they can also be regarded as learners who must gain much knowledge about the children in order to be effective.

---

[1] These numbers were taken from a listing of proposals funded for the Summer 1965 project. Other estimates of the total number of Head Start workers show somewhat different totals.

This is a roundabout way of stating that not only could the workers have an impact on the children, but also that the children, indeed the entire program, could have an impact on the workers. The same point applies, of course, to the parents and to the agencies and organizations that make up the community. The point seems self-evident, but it is nonetheless important and worth a few more words of elaboration.

The basic point is that the child does come to school with an experiential and cultural background, and is "deprived" or "disadvantaged" only in relation to some other standard or to the later demands of school and a technological society.[1] The child himself has a set of abilities and perceptual discriminations, but these may not be the abilities and discriminations that lead to success in school. He has a vocabulary and concepts, but these may not be appropriate to school. He has goals, expectations, evaluations, desires, fears, beliefs, and attitudes, but these may be at variance with the goals held for him by the school. While he is attracted or responsive to some people, places, objects, or situations, he is unreceptive to or frightened by or insensitive to others. However, his abilities, characteristics, and "cultural differences" undoubtedly have survival value, at least in his preschool years, and in some respects, beyond.

---

[1] See Section II. C for a detailed discussion of psychological characteristics of culturally deprived children.

Thus, he does have some modes of communication; he does have sets and emotional reactions; he does filter, combine, compare, weigh, distinguish, reject, and otherwise operate upon inputs.

In the school or CDC, the teacher produces or affects many of the inputs, either directly, through his overt behavior, or indirectly, by arranging, organizing, or constructing the environment and situations in which the child is placed. The teacher does not ever have complete control over the child's mental processes; however, it is a reasonable hypothesis that the teacher's behavior and operations can be such that they are more or less compatible with the present capabilities and response tendencies of the child. Some criteria of compatibility are that the inputs available can be processed and utilized by the child to produce a desired response and that the child will be more or less likely to do so, given the inputs. It is a further hypothesis that the development and learning will be more efficient and successful if the teacher is able to recognize a state of incompatibility from the child's responses and modify the inputs in the direction of compatibility.

This suggests that the teacher must have or develop standards, protocols, discriminations, schemata, or whatever that permit or lead to an appropriate recognition or categorization of the child's status. Such standards may be of a dual nature: (1) a definition or set of criteria for what constitutes a child's response (whether positive or negative) or absence of response to an input, and (2) a set of criteria for responses (e. g., skills, behavior patterns) associated with the development in the child of different (and eventually desirable) levels and qualities of capability, motivation, discrimination, problem-solving, conceptualizing, and other psychological processes.[1] A third possible consideration is that the teacher also needs criteria for the relevance of his own behavior to the psychological status of the child, on the one hand, and to the ability or response goals desired for the child, on the other.

---

[1] It is, of course, possible to view the latter set of criteria as applying to the categorization responses per se without considering their implied relationship to psychological constructs. However, that issue will not be explored here.

Each of these sets of criteria or standards relates to the teacher's operations of recognizing and identifying the present status of the child, recognizing and identifying a change in status, and behaving appropriately to the present status so as to encourage a change toward a desired status. Development of these criteria and operations may require as much learning and modification of customary behavior on the part of the teacher as is expected of the child. These elements assume particular importance when part of the solution to the overall problem of the socially disadvantaged child "is to proceed by a carefully developed and sequential program to bring him up to a level where he can learn in school as well as other children and eventually under the same conditions as other children" (Bloom et al, page 23, Reference 7).

A few examples of at least implicit or potential incompatibility of the sort described above have been culled from Head Start data:

- One consultant expressed concern because a teacher, whom she described as inflexible, categorized children upon first meeting them as "dull, average, or alert."
- "Most of the teachers engaged were trained and experienced in teaching older children. Those with the most years of experience as grade school or junior high teachers found it more difficult to adjust to the Head Start situation than the younger teachers less habituated to methods unsuitable for the younger children." (Berlin, Reference 6).
- In one case, the procedures of the public health nurses in administering shots left a scene of bedlam at the center in question and "required all the skill" of the staff for an hour after the departure of the nurses to quiet the hysterical children.
- "... a visit from an ambulance [was] arranged to familiarize the children with what might be a frightening part of the city's services. (Unfortunately, the driver, well-meaning as could be, knew nothing about small children and his entire talk was either over their heads

or expressed in the most negative and threatening words! 'Too bad that people are afraid of ambulances... hurt, injured, sick people to the hospital... shock... due to fear... very dangerous... can't breathe so we use this oxygen... etc.')" (Reference 6).

- "... the doctor seemed stern and not compatible with the children. This woman doctor made remarks about some children having pierced ear lobes.... " (Quoted from a teacher by Montez, Reference 74).

These very gross examples do not necessarily identify specific or quantitative variables, nor do they imply a particular long-term outcome or effect in the children. They do, however, suggest areas in which it is reasonable to suppose that changes in the adults--one form of impact--would have desirable consequences. A problem for research is to seek out ways of defining and measuring the appropriate variables so that evaluation can be made.[1]

There is no intention here to espouse a theory of psychological processes or social interaction. The preceding remarks are intended to provide a framework for examining the relationship of staff members to children.

The problems of research on and evaluation of the relationship between inputs to the child (whether these come from the people, activities, or facilities of a CDC or from parents and family), on the one hand, and change in performance of the child, on the other, are very complex both theoretically and methodologically (cf. Gage, passim, Reference 38). There are problems of definition, measurement, and categorization of teachers, teacher's aides, parents, program structure, and activities. Similarly, there are problems of classification and/or measurement of children on relevant characteristics and performance variables. Finally, there are problems of measuring and interpreting relationships between the two realms of variables. Throughout, there is the need for the identification of practical and significant variables and relationships, especially those that may point to remedial steps to improve effectiveness in dealing with the complicated problems of development and education.

---

[1] The point has been made with specific reference to assessing the effectiveness of teaching methods by Wallen and Travers (Reference 106). In criticizing many comparative studies they say, "For the most part, studies which supposedly compare the effectiveness of two teaching methods are generally studies which compare two largely unknown conditions" (page 466).

There is one final reason for considering characteristics and functions of staff members and workers: they are important sources of information about the programs. It is thus of more than passing interest to define, to the extent possible, who and what the workers are.

1. Worker Characteristics

Demographic data on the total staff member population, both professional and subprofessional, is based on Staff Member Information forms collected from the 1-percent sample Child Development Centers (on a nationwide basis). These are presented in Exhibit II-65. The figures shown are percentages of a total sample of 5,200 forms. The number of centers represented in the figures shown is about 432. All but three states (Idaho, Montana, and Wyoming) are represented. There are approximately 900 staff members in this sample who served several centers rather than being affiliated with a single center.

Like the other figures, the percentages of "No Response" refer to the sample processed, not to the sample expected in the survey. For example, in Item 3, there were 213 cases (or about 4 percent of the 5,200) for which responses concerning the sex of the staff member were not reported or processed.

The sample reported here obviously includes over four times as many workers as expected in the Census Bureau's 1-percent sample. It includes, however, only about 33 percent of the forms received in the Census 10-percent sample (based on 1,114 centers). No determination of the contamination in the sample shown here has been made. However, the percentages for most factors and levels shown are very close to the percentages of the sample reported by the Census Bureau (see Table 7, Reference 89). It is true that 75 percent of the workers

EXHIBIT II-65 STAFF AND WORKER CHARACTERISTICS

Item(1)		Percent						
1. Age		Under 16	16-21	21-30	31-45	46-60	Over 60	No Response
		3.9	23.4	21.1	29.9	18.0	2.2	1.5
2. Race and/or cultural background	a.	Negro	White	Oriental	No Response			
		36.8	54.4	.4	8.4			
	b.	Amer. Indian	Mexican	Puerto Rican	French Creole	Eskimo	Other	No Response
		2.8	6.2	3.1	.9	.06	19.1	67.9
3. Sex		Male	Female	No Response				
		12.9	83.0	4.1				
4. Education completed		Yes	No					
a. Graduated elementary school		51.3	4.4					
b. Graduated high school		48.5	11.2					
c. Graduated college		36.5	16.5					
d. Have M. A.		13.4	15.7					
e. Have Ph. D.		.8	14.0					
5. Position in child development center		Professional	Paid Neighborhood Resident	Volunteer Neighborhood Resident	Other Volunteer	No Response		
		34.5	40.8	5.9	2.9	15.9		

EXHIBIT II-65 (Continued)

Item(1)	Percent						
6. Usual family income per year	Under $1,000	$1,000-1,999	$2,000-2,999	$3,000-3,999	$4,000-4,999	$5,000-5,999	$6,000-7,999
	6.4	6.2	6.0	8.3	10.2	12.6	15.2
	$8,000-9,999	Over $10,000	No Response				
	10.9	15.4	8.8				
7. Previous experience with children from conditions of poverty	None	1-3 Years	3-5 Years	Over 5 Years	No Response		
	44.4	16.3	6.2	30.5	2.6		
8. Previous experience with preschoolers	None	1-3 Years	3-5 Years	Over 5 Years	No Response		
	44.4	24.6	6.7	21.3	3.0		
9. Can speak language other than English fluently	Yes	No	No Response				
	22.3	76.7	1.0				
10. Used this language with children in Head Start program	Yes	(% of number (N = 1,160) answering Yes to Item 9)					
	88.4						
11. Attended NUEA training session	Yes	No	No Response				
	31.7	65.1	3.2				

Note: (1) Item numbers refer to the Staff Member Information Sheet. See Appendix A for a copy of this form.

in the processed sample were paid (professional and neighborhood resident),[1] while only 47 percent of the total workers are listed as paid. This disparity is probably the result of a large number of factors, including the matter of definition of who were workers for sampling purposes.

The best use of the data is to provide an indication of the general order of proportions of characteristics. No attempt is made to estimate the reliability of the rate of occurrence of these characteristics in the Head Start worker universe.[2]

Viewed in the light described above, there are points of interest in Exhibit II-65. The modal age of workers was around 30 to 45 years, but the second most frequent age was 16 to 21 years. This would appear related to the bimodal distribution of responses in Items 7 and 8. Staff members had had either little or no experience with preschoolers or children from conditions of poverty or had had more than 5 years of such experience. Another point of interest in connection with Items 7 and 8 is the extent to which the two distributions agree in percentages at each experience level. A sizable portion of workers probably had had little or no experience either with preschoolers or with children from conditions of poverty. This is important because, as will be seen in a later section, the majority of workers in the sample felt they had gained a great deal from both of these aspects of their Head Start experience. The same point is stressed in a number of local studies.

Another point worth noting is the high number of workers who used their ability to speak a language other than English (Item 10). Item 10 consists of responses from 1,025 workers, or about 20 percent of the whole sample (that is, about 1-1/2 times the number of people in the sample represented by the percentages from the cultural backgrounds identified in Item 2b).

---

[1] See Exhibit II-65, Item 5.

[2] An interesting comparison of characteristics is provided by Exhibits III-14 and III-15 for CDC staff members and workers who attended NUEA training sessions.

The percentages of respondents who checked whether or not they had graduated from elementary school, high school, etc. (Item 4), are not mutually exclusive. That is, they are percentages of Yes or No responses to the second part of Question 4 of the Information Sheet (see Appendix A).

An attempt was made to assess the characteristics denoted in Exhibit II-65 by sorting forms on three variables: ethnic and cultural background, position in the center (professional and other), and age (under 30 years, over 30 years). Five levels of ethnic and cultural background were used. There was a loss of about 65 percent in the sample by making this classification, the resulting sample having N = 1814. The resulting frequencies of occurrence within classifications are shown in Exhibit II-66. The data are of particular interest from one point of view. They suggest something of the bias in the incompleteness of the larger samples. It would appear that the professionals, and especially the older professionals, were more thorough in completing the data forms used in the program.

Exhibit II-67 shows percentages of the professional workers having selected characteristics. The figures are based on all professional workers regardless of ethnicity. A cross comparison with figures in Exhibit II-65 shows no great difference in terms of proportion of sexes, regardless of age. However, there are some striking differences in proportions having various amounts of experience with culturally deprived children and with preschoolers. Similarly, a much larger number of professionals, young and old, attended an NUEA training session than might be suspected from the overall sample. Within the sample, intra-age differences appear about as would be expected.

While there is no usable information available in the 1-percent sample on the characteristics of Head Start subprofessionals, there is such data obtained by an independent study. Martin B. Miller and Barrie Cassileth (Reference 73) conducted a survey of 86 subprofessional workers in 30 Head Start centers.[1] Ten of the centers had a predominately white

---

[1] The number of centers visited in each region were: 5 in the Northeast, 3 in the Middle Atlantic, 4 in the Southeast, 3 in the Midwest, 4 in the Southwest, 6 in the West, 3 in the Far West, and 2 in the Virgin Islands.

EXHIBIT II-66 THREE-WAY CLASSIFICATION OF STAFF AND WORKERS

Racial and/or Cultural Background	Professional		Other		Sub-Totals
	Under 30	Over 30	Under 30	Over 30	
White	444(25)(1)	609(34)	79(4)	35(2)	1,167(64)
Negro	179(10)	364(20)	13	18	574(32)
White and Puerto Rican	9	15	1	0	25(1)
Negro and Puerto Rican	2	1	0	0	3
Mexican	21(1)	19(1)	4	1	45(3)
Subtotals	655(36)	1,008(56)	97(5)	54(3)	
Total	1,663(92)		151(8)		1,814

Note: (1) Approximate percentages of the sample that are greater than 1 percent are given in parentheses.

EXHIBIT II-67 SELECTED CHARACTERISTICS OF PROFESSIONAL STAFF MEMBERS BY AGE

Item/Age	Percent[1]				
3. Sex	Male		Female		N
a. Under 30	13.4		86.6		655
b. Over 30	17.1		82.9		1,008
7. Previous experience with children from conditions of poverty	None	1-3 Years	3-5 Years	Over 5 Years	N
a. Under 30	38.6	37.3	12.5	11.6	655
b. Over 30	14.3	10.1	8.8	66.8	968
8. Previous experience with preschoolers	None	1-3 Years	3-5 Years	Over 5 Years	N
a. Under 30	46.8	38.6	7.7	6.9	648
b. Over 30	32.9	20.1	8.2	38.8	993
11. Attended NUEA training session	Yes		No		N
a. Under 30	52.9		47.1		643
b. Over 30	65.9		34.1		980

Note: (1) Percentages are for the total number in each age level in each item.

enrollment, 11 Negro, 2 mixed, 2 Puerto Rican, 3 Mexican, and 2 Indian. At each center a consultant interviewed and observed one teacher and two subprofessionals. While the sample is small, there appears to have been an attempt to include workers from many ethnic backgrounds. Eight social and cultural backgrounds are represented by the 86 workers: white, Negro, Mexican, West Indian, Puerto Rican, American Indian, Japanese, and Egyptian.

Exhibit II-68 presents selected characteristics of the sample of 86 subprofessionals. It may be noted that 41 percent were in their teen years. The mean age is about 27. While the frequencies of marital status, education, and workers with children in the program are given, they are not correlated with age. Thus, while 56 percent of the total sample had completed high school, it is not known what percentage of the 20 years and older group had done so. Six percent of the sample had completed 4 years of college.

2. Worker Experience

With respect to the experience of the staff members, it was stated above that the 1-percent sample indicates that 44 percent had had no previous experience with preschoolers; 25 percent had had some experience (1-3 years); and over 20 percent had worked with preschoolers for more than 5 years. Also, 44 percent reported that they had had no previous experience with children from conditions of poverty; 16 percent had little experience (1-3 years); and 30 percent had more than 5 years of work in this area.

If we look more specifically at the teachers, the educational consultants' reports show that in 64 percent of the centers visited, a majority of teachers had had one or more years' experience in kindergarten and elementary education. However, as shown in Exhibit II-69, in only 10 percent of the cases were the majority of teachers experienced in nursery school teaching. In about 35 percent of the centers visited, the majority of teachers had received professional training in child or human growth and development or early childhood education. This suggested concentration of Head Start teacher experience in elementary education is supported by independent studies of specific Head Start projects.

EXHIBIT II-68 CHARACTERISTICS OF SUBPROFESSIONAL WORKERS

Item	Percent(1)						
1. Age	12-19	20-29	30-39	40-49	50-59	60-64	No Data
	40.7	18.6	18.6	18.6	0.0	2.3	1.2
2. Marital status	Married	Single	Divorced or Separated				
	38.0	58.0	4.0				
3. Sex	Male	Female					
	4.3	95.7					
4. Ethnic background	White	Negro	Mexican	West Indian	Puerto Rican	American Indian	
	40.7	36.0	8.1	5.8	4.7	23	
	Japanese	Egyptian					
	1.2	1.2					
5. Community of residence	Same Community as Center	Other					
	81.0	19.0					
6. Education	0-8 Years	9-12 Years	College +				
	12.7	61.7	25.6				
7. With children in program	Yes	No					
	22.0	78.0					

Note: (1) N = 86

EXHIBIT II-69 TRAINING AND EXPERIENCE OF HEAD START TEACHERS(1)

Consultants' Checklist Question Number		"Yes" Answers as a Percentage of Total "Yes" Answers	"No" Answers as a Percentage of Total "No" Answers
A *majority* of teachers had professional training in:			
9.A.1	Child or human growth and development	16.7	10.1
2	Early childhood education	18.7	9.6
3	Elementary education	35.2	1.4
4	Child psychology	14.2	11.7
5	Pediatric nursing	2.3	19.4
6	Social work	4.5	19.1
7	Other	5.3	14.0
8	Mixed	2.7	14.3
A *majority* of teachers had one or more years' experience in:			
9.B.1	Nursery school	10.5	14.3
2	Kindergarten	20.2	10.2
3	Elementary school	43.9	1.4
4	Nursing	4.3	17.1
5	Social work	5.4	16.3
6	Recreation	5.7	15.1
7	Mixed	3.0	13.2
8	Other	6.6	12.0

Note: (1) Percentages are based on column totals, not on item totals.

In Greene County, Ohio, for example, 11 of a sample of 24 Head Start teachers currently teach in grades 1-4, 6 teach in grades 5-8, 2 in high school or above, and only 5 in preschool. The majority of teachers in the Greater Anchorage Area School District had one or more years' experience in kindergarten or elementary schools. In King County, Washington, very few experienced teachers of 3- and 4-year-olds could participate in Head Start, since only certified teachers could be accepted. In the report on the Newark, New Jersey, Head Start program it was stated that only regularly assigned Newark teachers of kindergarten and the primary grades were appointed. It can be hypothesized, of course, that this reliance on elementary school teachers resulted from the great number of programs that were sponsored by public school systems. It must be emphasized, however, that it is not known just what the various selection procedures were in many cases.

The available national information on the years of teaching experience of the Head Start instructors attending NUEA sessions is shown in Exhibit III-15. Of the 24 Greene County Head Start teachers, 18 had had 6 or more years of experience, while 11 had 11 years or more of experience (Reference 21). These 24 teachers had spent approximately one-third of their careers at one school. Cohnstaedt compared these teachers with 25 non-Head Start teachers and found that 14 had had 6 or more years of experience. The non-Head Start teachers had spent approximately two-thirds of their careers at one school.

Montez, in his Impact of Programs on Bilingual Pupils and Families (Reference 74), remarks that in a Southern California program for Mexican-Americans, 75 percent of the teachers were not familiar with the culture of the children. Three of the teachers were of Mexican-American extraction; two had majored in Spanish in college. Only 20 percent spoke Spanish. Montez infers that a greater percentage of teachers should have been familiar with the culture of the children. The extent of this problem in programs with other ethnic groups is not known at this time.

The experience of the subprofessionals varied tremendously, for generally there were no educational or vocational requirements. It was stated earlier, for example, that only 56 percent of a sample of 86 workers had completed high school. Many of the subprofessionals in Head Start were parents and other residents of the community. Miller and Cassileth report that 43 percent of the workers were parents, and half of them had children in the program. Eighty-one percent of these workers were residents of the community in which the center was located. For example, in Charlestown, Massachusetts, the mothers were recruited as neighborhood aides (with work primarily outside the classroom). All but two had children in the program. In Newark, New Jersey, the priority for positions as teacher aides was given to parents of Head Start children and to residents of the poverty areas. The only requirement was that the applicant read and write.

The data from the subprofessional sample does not include information on income, so the extent to which the disadvantaged were employed is not known.

3. Worker Head Start Interest

There is no available information on a national level concerning why some 184,000 staff workers sought employment in the summer program. There is an indication, however, that many workers had a high expectation that the program would be of value. S. T. Friedman, J. Pierce-Jones, and W. E. Barron (Reference 86), of the University of Texas, addressed this point empirically as part of their series of special studies funded by OEO. They studied the attitudes and expectations of 1,250 teachers who participated in the University of Texas training program. Answers to questions were analyzed with respect to several teacher variables: ethnic group membership, socio-economic background, experience, and willingness to volunteer. The latter variable refers to whether the teachers volunteered "on their own" or were stimulated in some other way.

The findings with respect to eight items pertaining to the teacher's initial evaluations and expectations about the program and their predictions about its likely effectiveness were that the teachers did enter the program with enthusiasm and confidence in its value. Negro teachers and experienced teachers expressed greater confidence in their ability to be effective and in the program as a whole. There were no basic differences in initial attitudes about the program as a function of socio-economic background or volunteer status, although volunteers did have significantly greater interest in fulltime participation. The authors note, however, that "of greater interest is the fact that no matter how the teacher group came into the program, they all thought it would be effective and useful."

In Greene County, Ohio, 24 Head Start teachers (out of a total of 29) were compared with 25 teachers of first grade children who had not taught in Head Start. Of the 24 Head Start instructors, 6 stated that the reason they applied was primarily financial. Nine of the 24 stressed the challenge of working with poor children; 5 of these had previously taught low-income children. Several teachers wanted to gain experience in teaching preschool children. Five instructors indicated that they needed a summer job, although a few of these listed this as a secondary motive. For many, it was the challenge of working with smaller classes.

Only 4 of the 25 non-Head Start teachers had considered applying. One did apply but was not accepted. Of the remaining 21, 13 had wanted a free summer, 3 had other obligations, and 2 stated that advancing age was the reason. Only 2 of the 25 had no knowledge of the program.

In the subprofessional category, Miller and Cassileth did ask the 86 workers how they were employed and why they had applied. The responses and their percentage distribution follow:

How Employed?	Own Initiative	Offered by HS Personnel	Personal Connections	Neighborhood Youth Corps	Other Agency	Other
	30.2	27.9	19.8	7.0	5.8	9.3

Why Applied?	Like the Work	Needed Money	Wanted to Help	Wanted Experience	Had Child in Program	Other
	39.5	14.0	9.3	7.0	4.6	29.1

One of the measures of impact on both the subprofessionals and the teachers is whether they would consider Head Start employment again. This will be considered in Section IV.

Concerning training, it will be noted in Section III that approximately 30,000 professionals (86 percent were teachers) attended Head Start training sessions sponsored by the NUEA. However, available sources suggest that there was less provision for training subprofessionals prior to work in Head Start.[1] Inasmuch as their roles were not uniformly defined, this does not appear surprising. Miller and Cassileth reported that 76 percent of their sample had no training, and of the 21 workers who did receive some orientation, only 7 had had more than two sessions of instruction. The Chicago Committee on Urban Opportunity, reporting on the volunteer effort, stated that while training for all 1963 volunteers was a program objective, that goal was not met. In Newark, New Jersey, the Office of Homemaker Service of Essex County trained the subprofessionals. Therefore, while it is likely that the majority of subprofessionals were not trained for their Head Start work, there were projects which made training an important part of the program.

4. Teacher Styles and Attitudes

The Worker's Attitude Scale (see Appendix A) was designed to measure changes in workers' attitudes about the poor and poor children as a result of their Head Start experience. Results from data obtained in the 1-percent sample are not available at this time. Berlin (Reference 6) reported results obtained from samples of 28 and 24 teachers and teacher's aides, respectively. The pretest results are shown in Exhibit II-70. The means shown in the exhibit are for the two main sections of the scale. Berlin considered items in Part 1 of the scale to be related to a "general attitude toward poverty." The items in Part 2 were scored and interpreted to relate to "attitude toward Head Start children as compared with 'most children'." As can be seen, attitudes in all cases were generally strongly favorable. Although posttest means are not shown here, there were no significant differences or changes in either subgroup on either part of the scale after a 5-week interval. Berlin notes that "several teachers and aides expressed annoyance [about Part 2 of this scale] because they feared that it was an attempt to portray the children from homes of the poor as 'less good' behaviorally."

---

[1] Only 10 of the 151 nonprofessionals represented in Exhibit II-66 said they had attended an NUEA training session.

EXHIBIT II-70 WORKER ATTITUDES (BERLIN)(1)

Attitude/Group	Possible Score	Pretest Group Mean	N
1. General attitude toward poverty	-42 to 78		
a. Teachers		48.57	28
b. Teacher's aides		46.17	24
2. Attitude toward HS children as compared with "most children"	0 to 90		
a. Teachers		42.14	28
b. Teacher's aides		43.92	24

Note: (1) Reference 6.

Five studies (References 21, 68, 33, 86, and 88) have looked specifically at teacher styles and attitudes. The Cohnstaedt study is primarily directed towards community impact, but there is some information on Head Start teacher styles. The Lamb and Eisenberg studies, because they relate teacher styles and attitudes to the development of the child in Head Start, are discussed in Section IV.

The study on Teacher-Belief Systems and Preschool Atmospheres (Reference 88) focused on 168 teachers participating in the Head Start training program conducted by the University of Colorado Extension Division. The authors hypothesized that the belief or personality systems of teachers would influence their teaching styles. To test this hypothesis the teachers were classified in terms of four conceptual systems; a sample from each system was then observed and rated on 26 dimensions "assumed to reflect educationally desirable and undesirable behavior toward their preschool students."

The classification was made on the basis of performance by the teachers on the "This I Believe" (TIB) test.[1] Two of the classification systems stress concrete modes "of dimensionalizing and construing the world," and two stress abstract modes. Systems 1 and 2 (concrete) differ in that System 1 would include persons who have "highly positive attitudes toward institutional referents,"[2] while System 2 would include concreteness with negative attitudes. System 4 is the highest level of abstractness, while System 3 represents the second highest level of abstraction.[3]

Of the 168 teachers tested, none was classified in System 2, and only 10 were classified in System 4. The remainder were in either System 1 or 3, although the authors did not provide these frequencies.

---

[1] The test was developed specifically as a measure of conceptual or belief systems; it requests the respondent to indicate his beliefs about a number of socially and personally significant concept referents.

[2] For example, religion, friendship, the American way of life.

[3] For a complete discussion of the TIB and the classification, see the independent study.

In order to test whether the conceptual systems influenced the teacher's classroom style and attitude, ten representatives of Systems 1, 3, and 4 were selected for observation. It will be noted that this includes all the representatives of System 4, but only a sample from Systems 1 and 3. All of the teachers had prior teaching experience. System 1 teachers (most concrete) had taught on an average of 10.1 years. System 3 teachers had taught 5.8 years; System 4 teachers, 5.4 years. Only one System 1, two System 3, and three System 4 teachers had previously taught at the preschool level. All teachers had participated in a 1-week Head Start training program.

As stated earlier, these 30 teachers were observed and rated on 26 teaching dimensions, each one measured on a 6-point scale of above and below average.[1]

It was hypothesized that the more abstract teachers would score higher than the more concrete teachers on dimensions 1-19, and lower than the more concrete teachers on dimensions 20-26.

The hypothesis was supported. The predicted differences between Systems 1 and 4 emerged on all 26 dimensions. In addition, System 3 teachers scored between Systems 1 and 4 on 23 of the 26 items. The authors also stated that the Systems 1 and 4 teachers differed significantly on 15 dimensions. The study also included a factor analysis of the ratings on all dimensions.

An important observation of this independent study is that 13 of these 15 significant dimensions were contained within either the factor of dictatorialness or task orientation. The authors state that "System 1 teachers were significantly more dictatorial than representatives of either System 3 or System 4 and at the same time significantly less task-oriented than teachers from System 3 or System 4."

---

[1] The dimensions were: (1) expression of warmth toward the children, (2) perceptiveness of the children's wishes and needs, (3) flexibility in meeting the needs and interest of the children, (4) ability to maintain relaxed relationships with children, (5) attention to the individual child, (6) task involvement, (7) enjoyment of teaching, (8) enlistment of child participation, (9) encouragement of individual responsibility, (10) encouragement of free expression of feelings, (11) encouragement of creativity, (12) teaching new concepts, (13) ingenuity in improving teaching and play materials, (14) utilization of physical resources, (15) task effectiveness, (16) diversity of activities simultaneously permitted, (17) smoothness of classroom operation, (18) consistency of rule enforcement, (19) use of functional explanation of rules, (20) use of nonfunctional explanation of rules, (21) use of unexplained rules, (22) rule orientation, (23) determination of classroom and playground procedure, (24) need for structure in teaching activities and relationships with children, (25) punitiveness, and (26) anxiety induced by the observers' presence.

The study concludes, therefore, that "... the more abstract teachers in this study were clearly superior to the more concrete teachers in the extent to which they produced educationally desirable atmospheres in their classrooms." The authors do state further that they can "only conjecture at this point on the differential effect of . . . teacher differences . . . upon the learning and behavior of the children."

If one accepts the conclusion from the data presented, then it would seem important that these teachers with different conceptual systems and teaching styles be studied in terms of their effect on Head Start children.[1] As mentioned earlier, the Lamb and Eisenberg works, which also classified teachers according to conceptual style, were the only independent Head Start studies which attempted to do this. Because of the program impact implications of these studies, they are discussed in Section IV. If the results of these and other studies show that different styles do have a significant effect upon the learning and behavior of Head Start children, this will, of course, have important implications for the selection and training of teachers.

---

[1] There is a definite need to pursue such studies. In a review of the literature of research on authoritarian versus nonauthoritarian methods of teaching as related to academic achievement, Wallen and Travers (Reference 106) concluded that results are not readily generalizable to the "environmentally deprived sector of our country." Other findings relevant to the area being discussed here are that there has been found in at least one study a significant relationship between performance of pupils and the behavior of teachers as perceived by the pupils (Reference 106). Stern (Reference 101) makes reference to two studies in the research literature which have indicated a general disparity between avowed beliefs about educational philosophy and actual classroom behavior. He also concludes that "direct evidence [of the effect of teachers' attitudes on pupil performance] .. is surprisingly meagre." However, one study found "clear evidence that the teacher's personality has a marked and measurable effect on the progress of her pupils academically and socially. There also appeared to be an interaction between the type of teacher and her children's emotional adjustment as shown on the children's feeling test" (Washburne and Heil, quoted in Getzels and Jackson, page 532-3, Reference 39).

Pierce-Jones conducted a factor analysis of observed interactions between Head Start children and teachers, taking a sample of 70 Head Start centers in 40 Texas communities. These teachers were rated on 47 different items (compared with 26 in the Colorado study), and a factor analysis grouped these 47 in 8 interpretable factors: stimulating cognitive perceptual development, warmth and supportiveness, respect for child, motor skills and psychological support, dependency needs, positive versus negative reinforcement, perceptual and emotional control, and middle class orientation.

In Greene County, Ohio, the 24 Head Start teachers and 25 non-Head Start teachers were compared in terms of preschool goals which they considered most and least important. It should be mentioned that these teachers were interviewed after Head Start had concluded; therefore, the extent to which Head Start itself influenced the teachers is not known. Also, of the 24 Head Start teachers, only 13 currently teach preschool, first, or second grades. All of the non-Head Start teachers are in this group, and it is not known if the experience of teaching older grades influences the selection of the most important program goals. Therefore, the results, as Cohnstaedt indicates, are suggestive only. He found that three out of four Head Start teachers were oriented to "innovative-expressive" goals, while only two out of five non-Head Start teachers were so oriented. A substantial minority of the latter group were oriented to the "traditional-restrictive" goals.

From the available research[1] information it can be concluded that there was a diversity of teacher styles and attitudes in the 1965 Head Start program. From the Colorado study it appears that a minority of the teachers were classified in the abstract systems, although the authors did not indicate the number in Systems 1 and 3. Only 10 of the 168, however, were in the most abstract system. This is the only indication of order of magnitude in teacher styles or attitudes of 1965 Head Start.

---

[1] Some of the research studies have been discussed in more detail than others. The reader should not infer an implicit value judgment because of this.

Observations were not made nationally, but only in selected areas such as Colorado, Texas, and Ohio. In addition, the instruments used in the three cited studies were not similar. Two studies, the ones in Colorado and Ohio, suggest that the more abstract or innovative teachers are better for Head Start. These are not conclusive, however, for they were not related to the performance of the children.

5. Subprofessional Duties

Subprofessionals varied in their duties and responsibilities. The Miller and Cassileth study of 86 subprofessionals found that physical-active and verbal-responsive activities were the two most frequently observed kinds of behavior. This is generally supported by the subprofessionals and teachers interviewed. Over 70 percent of each group said that the subprofessionals regularly sat and/or ate with the children and were involved with groups of children in outdoor and indoor play. Over 60 percent of the respondents indicated that these workers regularly were involved in setting up, cleaning, and rearranging the room and in field trips with other adults. One-half the subprofessionals said that they were regularly involved in indoor play with the individual child; slightly less than half indicated regular involvement in outdoor play with the individual child. Sixty percent of the teachers stated that the subprofessionals regularly participated in this way.

Subprofessionals almost never were supervised by another subprofessional, nor did they go on field trips with the child alone, make home visits, act as a translator, or transport children.

Selected independent studies stress the above-mentioned duties and others. In its study of the use of volunteers, the Chicago Committee in Urban Opportunity stated that in the Board of Education program, the volunteers were not used in the classroom nor as an aid to the professional. They were office workers, pupil recruiters, medical assistants, and chaperones for trips. A number of teen-age girls were used in Warminster, Pennsylvania; they babysat during parent meetings, went on trips, walked children to and from classes, and participated in the classroom.

Graduate students were used by the Archdiocese of Chicago School Board to recruit children, encourage parents to participate, visit homes, identify and refer problems, and work with the parents. Mothers, as neighborhood aides in Charlestown, Massachusetts, were involved in similar activities.

In this subsection we have attempted to describe various aspects of some of the 184,000 CDC staff members: their characteristics, experience, and Head Start interest. We have also discussed teacher styles and subprofessional duties. In Section IV we shall discuss the impact of the staff workers on the program and the children and the impact of Head Start on the workers.

F. The National Samples

In this subsection we shall discuss the sources and reliability of the data that is called elsewhere in the report national 1-percent sample data. Ideally, a description of the source of sample data should also be, at least implicitly, an argument that the data reflect the target population up to the limits of sampling error. We shall describe the sampling schemes first; we shall then examine the worth of the data.

We shall describe first a Census 1-percent sample that is not the 1-percent sample of this report.

Census chose a 10-percent sample of Child Development Centers (CDC's). From the children in these (roughly) 1,100 centers, Census chose a 1-percent sample of Head Start children as follows: 62 centers were singled out as interesting because of ethnicity or size and were included with certainty; the remaining centers of the 1,100 were chosen with probability (number of classes in the center)/10; finally, each child in the chosen centers was included with probability 1/(number of classes in the center). This usually resulted in children being drawn from more than one class within the center. For each child so chosen, Census attempted to collect: (1) the Medical/Dental and Family History; (2) the Psychological Screening Procedure; and (3) the Preschool Inventory.

The collection was pursued vigorously, with a great deal of follow-up effort and, as of November 1965, the nonresponse rate for (1) and (2) above was low (less than 8 percent). The nonresponse rate for (3), however, was over 40 percent.

For each staff member in the centers chosen for the Census 1-percent sample, Census attempted to collect the Paid and Voluntary Worker's Evaluation and the Staff Member Information Sheet. The nonresponse rate on them as of November was 25 to 30 percent.

We turn now to describing what we have called (by necessity and not by choice) the 1-percent sample in this report.[1] It is the Census 1-percent sample forms as of November plus others, some of which were included by mistake. These others are probably: (1) forms that Census intended to include but which arrived in November or later;

---

[1] Obtained from OEO Information Center data files. Census 1-percent sample data are referenced as such.

(2) forms from children that Census did not select in centers it did choose for its 1-percent sample; and (3) forms from children and workers in the 10-percent sample of centers.

Census tabulated the answers to about a hundred questions from their 1-percent sample, so it is possible to compare the 1-percent sample of this report with the Census 1-percent sample and thus get an idea of the amount and kind of extraneity insinuated into the 1-percent sample of this report. Exhibit II-71 contains answer frequencies to four of the Family History Questions tabulated by Census, along with the partly extraneous additional answers in the 1-percent sample. Also included are some numbers which facilitate the comparison. It is clear from Exhibit II-71 that the incremental children added to the Census sample contain more Negroes and slightly more children from families whose incomes fall between $3,000 and $5,999 than would a random selection of children from a population from which the Census figures were also a random selection. However, even ideally the incremental answers are not a random selection but rather the results from some late reporting clusters. Moreover, the effect of the differences from expectations of the incremental answers on the total is not large in the sense of percentage error.

We have two more facts to add to the evaluation of the possible bias from the extraneous forms. Census processed 5,036 Medical/Dental Forms in November, and the 1-percent sample contains 6,309. About 14 percent of the centers named by the 1-percent staff forms (but nothing as great as 14 percent of the forms) were not chosen by Census for its 1-percent sample. It is most unlikely, then, that the extraneous forms, of themselves, could have changed the descriptions and conclusions drawn from the 1-percent sample.

In addition to the sample data collected by Census, a sample of parent interviews was obtained by the National Opinion Research Council (NORC). NORC drew its sample of parents by drawing a 2-strata sample of children from the Census 10-percent sample of Child Development Centers. The two strata were the rural Midwest, with a sample size n_2 of 89, and the rest of the country, with an n_1 of 1,653. If N_2 and

EXHIBIT II-71 COMPARISON OF 1-PERCENT SAMPLES WITH CENSUS TABULATIONS

Questions/ Answers	Answer Frequencies from the Census Tabulation	Additional Answer Frequencies in the 1-Percent Sample	Corresponding Average Values Used in the Calculation of Chi Squared		Chi Squared
			Census	Additional 1-percent	
Sex					
Male	2,491	612	2,496	607	
Female	2,336	562	2,331	567	2.88
Race					
White	2,155	420	2,052	523	
Negro	2,047	601	2,110	538	
Other	41	61	81	21	130.65*(1)
Family Income					
Less than $3,000	1,916	418	1,906	428	
$3,000 to $5,999	1,457	368	1,490	335	
$6,000 or more	367	55	345	77	11.95*
Mother works					
Yes	1,425	359	1,435	349	
No	2,759	660	2,749	670	.55

Note: (1) Asterisk (*) indicates significance at a level lower than .005.

N_1 are the corresponding population sizes, NORC calculated that:

$$\frac{n_1 N_2}{n_2 N_1} = 4.3$$

In order to avoid further stratification (or sample more heavily than 2/3 from the classes), NORC chose 230 children from rural southern centers not in the Census 10-percent sample.

In addition to the sample just described, NORC made eight special samples of about 30 each from five ethnic groups and three poor groups.

Before discussing the problem of extraneous forms, we mentioned nonresponse. We now return to nonresponse and the muddling caused by it, which for the staff forms and especially the PPVT scores is far more severe than that from the unwanted forms. We shall discuss first the staff forms, because their response rate is so much higher (70 to 75 percent) than that for matched PPVT scores (10 percent) that the discussion is almost qualitatively different. Before proceeding further, however, we must make two general remarks for the benefit of the reader who likes to skip tenuous arguments. First, it would have been unthinkable not to have looked at and given our readers the opportunity to look at the data that was obtained; it is truly sui generis. On the other hand, an attempt to delineate the possible biases due to nonresponse is in the final analysis a discussion of what those who did not answer would have answered.

The two staff forms of interest are the Staff Member Information Sheet and the Paid and Voluntary Worker's Evaluation (PAVWE). The nonresponse rate of 25 to 30 percent is only marginally greater than the 20 percent that the Census Bureau is willing to accept. The gross finding of overwhelming enthusiasm could not be reversed by those who did not respond, no matter how disgruntled. For, as an example, consider the 71.5 percent of responses on the PAVWE that indicate general morale was "Very Good". Now, suppose that 25 percent did not respond. (The exact figure cannot be obtained because of lack of knowledge about the extraneous forms.) Then, if p is the percentage of nonrespondents who would have answered "Very Good", a p as low as 45.5 percent would reduce the overall percentage of "Very Good" to only 65 percent; a p of 25.5 percent would reduce it to 60 percent; and no p could reduce the percentage of "Very Good" below 53.6 percent. The final point in favor of the staff forms' reliability is that a follow-up effort was made and no glaringly debilitating consistencies in the nonrespondents were reported.

Insofar as possible, the Peabody Picture Vocabulary Test (PPVT) was to be given twice to each child in the Summer 1965 Head Start program. The intent was to give the PPVT the first time as early as possible and within the first 3 weeks of class. The test was to be given the second time to the same child at least 4 weeks later and preferably in the final week of class. The raw scores were recorded on the same forms on which were recorded the item responses of the Pre-School Inventory (PSI), which was also a pre/posttest. We considered only raw scores from the 1-percent sample. The PSI forms of the 1-percent sample children were scanned for the PPVT scores. The ID numbers of about 3,500 different children were found on the PSI forms; of these, 1,686 had at least one PPVT score. The number of the week of center operation was to be marked on the PSI form at the time of PSI and PPVT administration. If a child had two PPVT scores recorded on PSI forms on which were also recorded the week of center operation, he was said to have both a pretest and a posttest score if the difference in week numbers was at least three; there were 634 such children. Otherwise, a single score was attributed to a child, if possible, and called a prescore.

Out of a possible 6,309 1-percent sample matched PPVT scores, then, 634 were selected by a largely unknown mechanism. Selection usually singles out the better--e.g., the brighter child is easier to give a test to and more likely to be there when posttest time comes. A glance at the special study results reported in Section IV suggests that the 1-percent m PPVT scores are indeed high, even when adjusted for the fact that the 1-percent m PPVT children are older, by and large, than the special study children. [Interestingly enough, the rest of the 1-percent sample children are older still--see Exhibit II-73, page II-156. Since there is no reason to believe that the small amount of selection involved in getting age data on the whole 1-percent sample exerted much bias on the age estimates, there is a strong suggestion that the special studies selected young children--and if young, why not low PPVT scorers?]

Our interest, however, is not so much in where the children are on the PPVT scale as in where they are relative to their starting points or to each other. More precisely, we are interested in pre/post differences and factor level differences of both prescores (for description) and difference or regressed difference; translations on the PPVT scale that preserve these differences are of little interest. Our hope, then, is that even if there is a bias towards bright children, the differences of interest are preserved.

The special studies suggest that the raw score differences are, if anything, accentuated in the 1-percent m PPVT scores. [Whether or not higher prescores result in smaller pre/post differences when the selection of the high scores is on a basis other than highness receives considerable discussion elsewhere in this report (subsection IV.C). There is no evidence of it for this selection.]

A way of generating some evidence about whether selection of high PPVT scores destroys differential effects is to restrict one's analysis to children with low pre-PPVT scores. This was done to the extent summarized in Exhibit II-72. The result (that nothing matters but age and that impact on the young is less than on the older) parallels pretty accurately the differential effects discovered below by an analysis of covariance of all the scores. This is a weak indication that a real elimination of the putative bias towards high scores might leave the differential effects unchanged.

We have another exhibit, but no argument for it to support. Instead we resort to an anecdotal challenge to the reader. The Literary Digest poll that predicted Landon's victory in the 1936 presidential election collected, along with its selected straw votes, some secondary information

EXHIBIT II-72 ANALYSIS OF DIFFERENTIAL IMPACT ON CHILDREN WITH LOW PRE-PPVT SCORES

Factor Level	Frequencies of Big Gainers Among Those Whose Prescore Was 39 or Less	Frequencies of Small Gainers Among Those Whose Prescore Was 39 or Less	Corresponding Average Values Used in the Calculation of Chi Squared		Chi Squared
			Big Gainers	Small Gainers	
Sex					
Male	31	27	29	29	
Female	43	48	45	46	.46
Race					
White	24	19	22	21	
Negro	47	49	49	47	.54
Age					
Younger than 5 years	17	34	25.5	25.5	
5 years	40	33	36.5	36.5	
6 years or older	18	8	13	13	10.18*(1)
Urbanization					
Urban	50	54	52	52	
Rural nonfarm	16	11	14	13	
Farm	4	4	4	4	.76
Income					
Less than $3,000	37	30	33.5	33.5	
$3,000 or more	38	45	41.5	41.5	1.32
Family Intactness					
Mother and father	45	50	45	50	
Mother only	17	19	17	19	
Father only	1	1	1	1	0

Note: (1) Asterisk (*) indicates $p < .01$.

about the selected straw voters--e.g., how they had voted in 1932 and whether they were Republican or Democrat. After the fact analyses have been made, using the secondary information to adjust the straw vote totals, which indicate that Roosevelt should have been predicted winner. We have a lot of secondary information about the children who provided 1-percent matched PPVT scores vis-a-vis the 1-percent sample children who did not. Some of it is summarized in Exhibit II-73, which makes it pretty clear that the children who provided 1-percent matched PPVT scores were younger, poorer, and had more working mothers and smaller households than those who did not.

Two final points are worth noting. First, the nonmatching PPVT scores called "pre" throw no light on what the missing scores might be like, because they have no known mates and because there is no information about the times during the program when they were obtained. Second, there were many mistakes in scoring the PPVT. Of the first 16 sheets that we looked at, 9 had incorrect raw scores. The reported raw score averaged 1.5 points too high over the 16 sheets. We also found a center where 17 out of 18 postscores were identical with the corresponding prescore.

In summary, a reasonable position on the worth of the 1-percent m PPVT scores might be that pre/post differences were positive and that subtler distinctions are worth looking for but must be independently validated.

EXHIBIT II-73 COMPARISON OF CHILDREN HAVING MATCHED PPVT SCORES WITH THOSE WITHOUT THEM

Factor Level	Number of 1-Percent Sample Children with Matched PPVT Scores	Numbers of 1-Percent Sample or Census (C) Children Without Matched PPVT Scores	Average Value Used in the Calculation of Chi Squared		Chi Squared
			PPVT	Rest of 1-Percent Sample	
Sex					
Male	301	2,802	321	2,782	
Female	320	2,578	300	2,598	2.88
Race					
White	270	2,305	286	2,289	
Negro	313	2,335	294	2,354	
Other	8	94	11	91	3.30
Age		(C)			
Younger than 5 years	93	600	93	600	
5 Years	354	1,739	281	1,812	
6 years or older	187	1,753	260	1,680	45.58*(1)
Income					
Less than $3,000	295	2,039	264	2,070	
$3,000 - $5,999	185	1,640	207	1,618	
$6,000 or more	39	383	48	374	8.65*
Mother works					
Yes	215	1,569	193	1,591	
No	348	3,071	370	3,049	4.28*

EXHIBIT II-73 (Continued)

Factor Level	Number of 1-Percent Sample Children with Matched PPVT Scores	Number of 1-Percent Sample or Census (C) Children Without Matched PPVT Scores	Average Value Used in the Calculation of Chi Squared		Chi Squared
			PPVT	Rest of 1-Percent Sample	
Household size		(C)			
More than 8	106	840	127	819	
8 or fewer	528	3,243	507	3,264	5.01*

Note: (1) Asterisk (*) indicates $p < .05$.

III. PROGRAMS

A. Introduction

In this section, the total and regional distribution of Federal expenditures for Project Head Start is discussed, and a comparison is made between the per-pupil costs of the Head Start programs and the per-pupil costs of regular elementary and secondary school programs. A more detailed discussion of the intent and structure of the Child Development Center (CDC) is presented. Finally, the programs of the CDC are examined in relation to five factors: (1) medical/dental services, (2) daily programs, (3) social services, (4) parent participation, and (5) staff and workers.

B. Background Information

Project Head Start served the seven regions of the United States shown on the map in Exhibit III-1, as well as Guam, Samoa, the Virgin Islands, and Puerto Rico. The total cost of the project was $94.6 million, of which the Federal Government paid $82.7 million and the local communities paid $11.9 million. The state and regional breakdowns of these totals are shown in Exhibit III-2, as well as the total number of centers operated in each area.

The cost per child for the summer program averaged $168 across all programs. There was, however, considerable difference among states, as is shown in Exhibit III-3. Connecticut showed the lowest average cost per child of $121, and Mississippi the highest at $214.[1] These differences, as well as those observed within states, are accounted for partly by the differences in prices of various classes of service between rural and urban areas, and partly by differences in the composition of the programs--differences in the kinds and amounts of administrative support, in the facilities and services of the CDC's, in the length of the daily programs provided, etc.

An interesting comparison is provided, in Exhibit III-3, between Project Head Start costs and scaled estimates of the various state costs per pupil for regular elementary and secondary school programs. This exhibit shows that since Head Start was a more extensive effort than is made by the public school systems on a continuing basis, it was a relatively more expensive program to conduct. The percentage of scaled public school costs to Head Start costs ranged from a low of 14.5 percent to a high of 56.2 percent. The national average was 34.0 percent.

The CDC was the operating unit through which Head Start was to achieve the local goals previously outlined (see Section I). As a concept, the CDC was to be the focus of all available resources contributing to the total development of the child--resources of the family, community, and professionals. In scope and magnitude, it was new and unique in its

---

[1] This is exclusive of Alaska, where the average cost per child was $410.

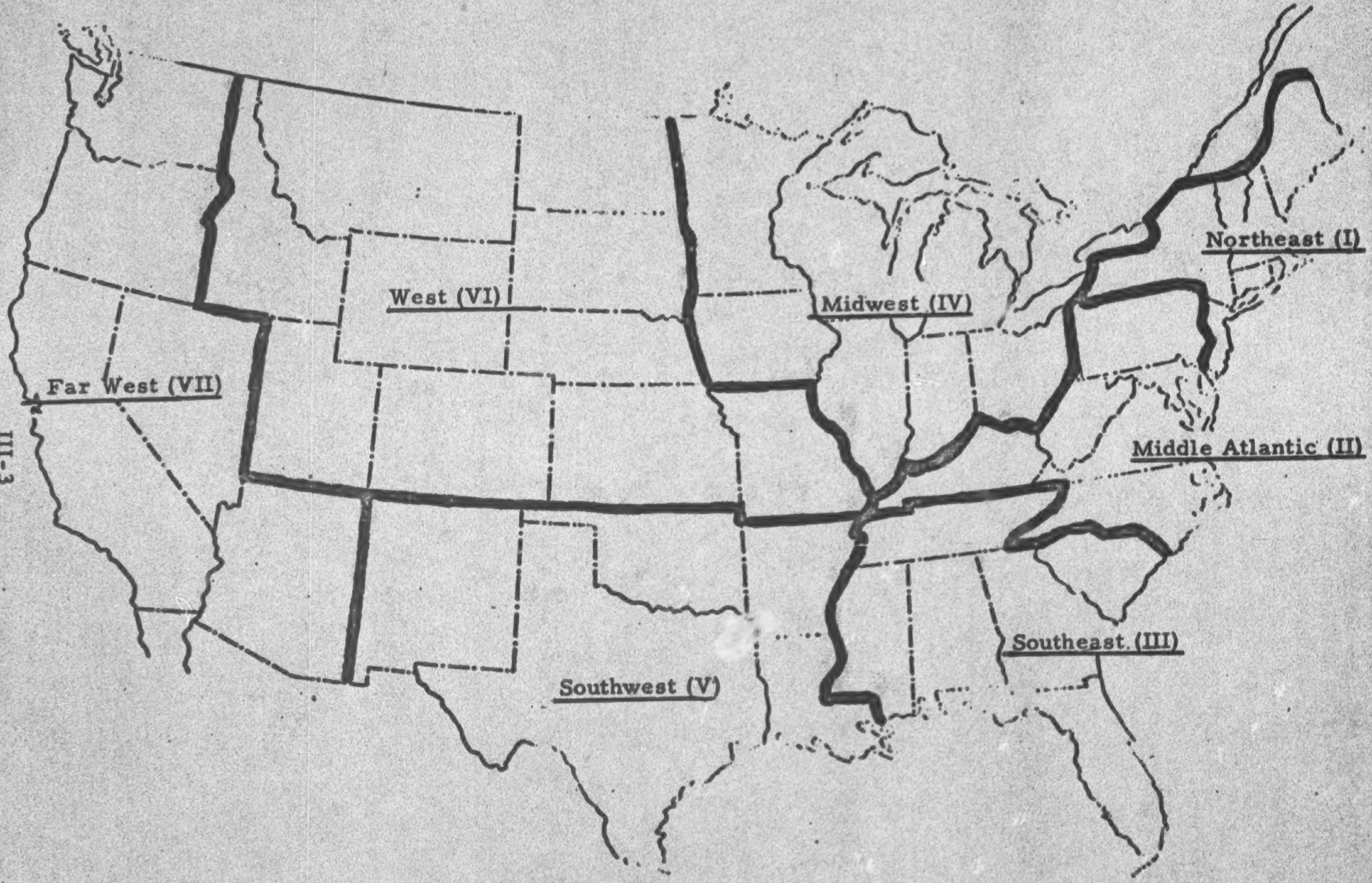

Northeast (I)
West (VI)
Midwest (IV)
Far West (VII)
Middle Atlantic (II)
Southeast (III)
Southwest (V)

EXHIBIT III-1 SEVEN HEAD START REGIONS

EXHIBIT III-2 STATE AND REGIONAL DISTRIBUTION OF FEDERAL HEAD START FUNDS AND CHILD DEVELOPMENT CENTERS

Region I - Northeast	Funds (thousands of dollars)	Centers
Connecticut	464.6	209
Maine	175.5	38
Massachusetts	1,363.4	405
New Hampshire	288.4	68
New Jersey	1,871.2	412
New York	6,560.0	830
Rhode Island	198.7	50
Vermont	310.7	98
Total	11,232.5	2,110
Region II - Middle Atlantic		
Delaware	237.6	103
District of Columbia	763.0	69
Kentucky	3,884.7	578
Maryland	1,077.5	202
North Carolina	3,914.8	804
Pennsylvania	2,231.2	381
Virginia	2,126.6	316
West Virginia	2,873.3	556
Total	17,108.7	3,009

EXHIBIT III-2 (Continued)

Region III - Southeast	Funds (thousands of dollars)	Centers
Alabama	2,068.4	288
Florida	2,349.4	346
Georgia	2,898.5	379
Mississippi	4,152.2	284
South Carolina	1,933.9	262
Tennessee	4,121.0	761
Total	17,523.4	2,320
Region IV - Midwest		
Illinois	4,431.6	324
Indiana	755.3	115
Michigan	2,356.0	472
Minnesota	476.3	90
Ohio	2,902.6	505
Wisconsin	371.6	46
Total	11,293.4	1,552
Region V - Southwest		
Arkansas	1,852.7	363
Louisiana	3,311.0	315
New Mexico	921.1	287
Oklahoma	1,252.1	365
Texas	5,377.6	906
Total	12,714.5	2,236

EXHIBIT III-2 (Continued)

Region VI - West	Funds (thousands of dollars)	Centers
Colorado	940.6	133
Idaho	65.0	15
Iowa	657.2	143
Kansas	316.5	64
Missouri	2,141.0	451
Montana	147.2	30
Nebraska	98.7	25
North Dakota	216.7	42
South Dakota	123.2	32
Utah	126.4	20
Wyoming	48.0	10
Total	4,880.5	1,055
Region VII - Far West		
Alaska	839.9	77
Arizona	1,187.5	139
California	2,943.2	527
Hawaii	337.2	90
Nevada	104.7	25
Oregon	219.3	34
Washington	505.3	86
Total	6,137.1	978

EXHIBIT III-3 STATE AND REGIONAL EXPENDITURES PER PUPIL (HEAD START VERSUS PUBLIC SCHOOL SYSTEMS)

Region I - Northeast	Head Start Expenditures Per Pupil (in dollars)	Percent PS/HS(1)	Scaled Public School(2) System Expenditure Per Pupil (in dollars)
Connecticut	$121	56.2	$68
Maine	170	27.0	46
Massachusetts	191	34.0	65
New Hampshire	190	28.4	54
New Jersey	188	38.8	73
New York	201	42.8	86
Rhode Island	210	30.5	64
Vermont	190	31.6	60(3)
Region II - Middle Atlantic			
Delaware	161	42.2	68
District of Columbia	171	36.8	63
Kentucky	176	23.9	42
Maryland	157	38.2	60
North Carolina	170	24.7	42
Pennsylvania	183	34.4	63
Virginia	162	27.2	44
West Virginia	178	23.0	41
Region III - Southeast			
Alabama	168	21.4	36(3)
Florida	149	32.9	49
Georgia	177	22.0	39
Mississippi	214	14.5	31
South Carolina	155	21.3	33
Tennessee	164	22.0	36

EXHIBIT III-3 (Continued)

Region IV - Midwest	Head Start Expenditures Per Pupil (in dollars)	Percent PS/HS(1)	Scaled Public School(2) System Expenditure Per Pupil (in dollars)
Illinois	$147	51.0	$75(3)
Indiana	195	32.8	64(3)
Michigan	158	42.4	67(3)
Minnesota	184	36.4	67
Ohio	157	35.7	56
Wisconsin	184	35.9	66
Region V - Southwest			
Arkansas	176	20.4	36
Louisiana	193	28.0	54
New Mexico	164	35.4	58
Oklahoma	192	24.5	47
Texas	141	49.6	70
Region VI - West			
Colorado	166	36.1	60
Idaho	130	36.9	48(3)
Iowa	177	34.4	61(3)
Kansas	145	42.1	61(3)
Missouri	148	39.2	58(3)
Montana	177	35.6	63
Nebraska	144	36.1	52
North Dakota	194	29.4	57
South Dakota	178	29.8	53
Utah	160	30.6	49
Wyoming	177	39.5	70

EXHIBIT III-3 (Continued)

Region VII - Far West	Head Start Expenditures Per Pupil (in dollars)	Percent PS/HS(1)	Scaled Public School(2) System Expenditure Per Pupil (in dollars)
Alaska	$410	21.2	$87
Arizona	159	39.6	63
California	157	42.0	66
Hawaii	152	32.9	50
Nevada	188	33.5	63
Oregon	185	37.8	70
Washington	168	41.1	69(3)
National Average		34.0%	

Notes:

(1) Percent public school system versus Head Start.

(2) These figures have been calculated by taking the Office of Education expenditure estimates from "Statistics of State School Systems 1961-62" and multiplying them by a factor (.148) to adjust for the differences in program length between the "typical" school year and the Head Start summer program.

(3) Figures are based on average daily attendance rather than average daily membership.

attempt to utilize and direct these diverse elements of the child's environment toward the particular needs of each child, and in its orientation toward the culturally deprived child.

The CDC was to be family-centered, as well as child-centered, and the parents of the Head Start children were to play an important role in all aspects of the CDC. They were to help formulate its programs and policies, assist in the centers in various capacities as both paid and volunteer workers, and participate actively in the programs of the centers once they were in operation.

Since many of the children and families to be served by Head Start were not aware of the range of community services available to them, and at the same time the community agencies administering these services were not aware of the existence and needs of some of these families, community social services were to be a key element of the CDC activities. Effective use of these services was to be assured through follow-on, referral, and other means. Finally, the specialized services of various professionals were to be solicited. Experts in such diverse fields as nutrition, health, education, psychology, social work, and recreation were expected to play an important part in assuring the success of this "whole-child" approach.

The CDC as a physical unit consisted of the building and its associated outdoor play areas. It often had only one classroom, but again this depended on the location and size of the area to be served by the center.

It is not possible to describe a typical CDC in terms of either its facilities or its activities and services. Since each Head Start program was undertaken at community initiative, planned primarily by community members, and administered by a community agency, it reflected the unique combination of needs, skills, and interpretation of overall guidelines of the particular community.

It is possible to make some generalizations and more limited specific comments about the presence, absence, and adequacy of various program elements by drawing on material provided by the medical and educational consultants who visited more than 1,000 operating Head Start programs during the summer. In addition, a few research studies have commented on the program material observed, and certain related material has been provided by data collected on the Staff Member Information Sheet and the Paid and Voluntary Workers' Evaluation Form. In general, it is particularly interesting to compare the reports and opinions of consultants with those of staff members. While such comparisons are not generally discussed in this report, exhibits and text are organized to make it easy for the reader to crosscheck various points. The material has been organized into components relating to the children, parents, and staff and workers. A discussion of this material follows.

C. CDC Services, Activities, and Resources

1. Medical/Dental Services

The provision of complete medical/dental evaluations for the children was to be an important part of the CDC programs. The program guides distributed to recipients of grants suggested that the basic service include for each child:

- Medical history, developmental assessment, and physical examination
- Screening tests of vision, hearing, speech, and tuberculosis testing
- Laboratory tests of urine and blood
- Dental assessment
- Completion of immunizations
- Psychological evaluation
- Discussion with parents
- Teacher observations
- Follow-up services

Summaries of educational consultants' reports on the scheduling of some of these tasks and on the organizations providing specialized service largely in the medical/dental field are shown in Exhibits III-4 and III-5. As can be seen, the participation of professional groups, including the medical and dental societies, was less than might have been expected. Indeed, it was much less than hoped for by many Head Start applicants.

These exhibits also indicate that, while the scheduling of some kind of medical/dental examinations for the programs visited by the consultants was relatively complete, follow-up was a much more difficult task. In only about 60 and 55 percent of the cases of existing medical and dental needs had arrangements been made for services. Consultants also reported only a few instances in which the teacher had been assigned any specific responsibility for seeing that the child received medical care.

The National Opinion Research Center (NORC) parent interview data indicates that 84 percent of the responding parents stated that

EXHIBIT III-4 MEDICAL/DENTAL PLANNING

Consultant's Checklist Question Number		Percent of Responses(1)		Number of Responses
		Yes	No	
7A.	Medical examinations scheduled for all children	87.9	4.8	928
7B.	Dental examinations scheduled for all children	85.0	6.7	916
7C.	Immunizations arranged for	85.1	6.0	908
7D.	Needed medical treatment arranged for	60.5	18.7	875
7E.	Needed dental treatment arranged for	55.4	23.9	861
7F.	Glasses provided as needed	62.5	23.1	809
7G.	Responsibility assigned to see children get needed medical or dental treatment	72.4	13.5	858

Note: (1) From reports of OEO educational consultants, the remaining percentage was reported as "partial."

EXHIBIT III-5 ORGANIZATIONS PROVIDING ASSISTANCE

Consultant's Checklist Question Number		Percent of Responses		Number of Responses
		Yes	No	
6A.	Schools	94.7	5.3	888
6B.	Public health	88.0	12.0	892
6C.	Public welfare	82.8	17.2	882
6D.	Hospitals or clinics	59.2	40.8	810
6E.	Medical society	43.4	56.6	790
6F.	Dental society	43.5	56.5	787
6G.	Nursing society	27.4	72.6	728
6H.	Optometrists	32.9	67.1	744
6I.	Dieticians or home economists	53.5	46.5	780

their children received a Head Start medical examination, and that 70 percent felt that the examination was extremely worthwhile. Sixty-nine percent of the parents said that their children had received a dental examination, and 59 percent felt that it was extremely worthwhile.

Opinions of CDC staff members were also collected regarding the medical and dental programs. A tabulation of responses on the Paid and Voluntary Workers' Evaluation Form for a total of 6,320 workers associated with 432 centers in 47 states is shown in Exhibit III-6. This shows the percentage distribution of opinions about the availability of different services, including the medical and dental services.[1]

It can be seen that for this sample of workers the overall opinion was that the various services and facilities listed were satisfactorily available. Of the list, opinions are most positive about the availability of medical and dental services. The high rate of "Cannot Evaluate" responses with respect to the other services suggests a rather widespread lack of familiarity with such services, and thus no standard by which to judge their availability.

It should be noted that the sample of staff members and workers included here is essentially the same as that used to describe the general characteristics of workers in subsection II.E. Reference to Exhibit II-65 in that section will provide a fairly good indication of the composition of this sample with respect to the relative percentages of different attributes or characteristics represented in the sample.

The Workers' Evaluation Forms were also sorted according to the position of the worker in the CDC. Frequency distributions were obtained in each item for four categories of respondents: paid and volunteer professional, paid neighborhood resident, neighborhood volunteer, and

---

[1] For each item, the total number of responses in each opinion scale level was converted to a percentage of the total in the available sample. The column entitled "No Response" contains the percentage of workers in the available sample for whom no response was tabulated, for whatever reason. Reasons include failure by a worker to fill in the particular item or failure of the data processing operations to tabulate the response.

EXHIBIT III-6 AVAILABILITY OF SERVICES - WORKERS' EVALUATIONS

		Percent					
		Very Good	Good	Fair	Poor	Cannot Evaluate	No Response
13.	Availability of medical and/or dental services	44.4	33.5	9.4	2.6	6.7	3.4
14.	Availability of special-education facilities	18.2	29.8	14.0	6.9	25.8	5.3
15.	Availability of psychological and/or psychiatric services	12.5	21.9	12.9	11.7	34.7	6.3
16.	Availability of social service agencies	21.5	30.2	13.3	5.9	23.3	5.8

other paid and volunteer workers.[1] A chi-square was calculated for each item to test the hypothesis that the four distributions are not significantly different. All items in Exhibit III-6 so tested had X^2's that were significant ($p < .05$, $df = 12$). Indeed, this was the case for all items on the form except two, as will be seen later.

For the questions under consideration here, the professionals generally gave disproportionately high numbers of "Poor" responses, and, even more strongly, took a "Can't Evaluate" position with respect to these aspects of the program. It was true, however, that the majority answered "Good" or "Very Good."

A sample of proposals submitted by applicants for Head Start grants was reviewed. They showed an even wider divergence of medical/dental programs than that reported by consultants as the result of visits to the centers. In some cases, preliminary contacts and arrangements had been made for specialists' services and the support of various medical associations. More frequently, applicants had assumed (often incorrectly) that such services could be arranged free, or at a nominal fee.

There appear to have been some inconsistencies on the part of OEO in funding for medical programs. Consultants have cited several projects for which Head Start paid the entire cost of both complete medical checkups and follow-up treatments. In other cases, costs included for medical services were cut from programs during the budget review process. Many reports of friction because of these inconsistencies have been noted by the consultants.

In the extremely rural areas served by some Head Start centers, the problem of unavailability of professionals for health programs was particularly acute. The following story is typical:

> Arranging medical examinations has been difficult since there are only three doctors in the entire county. Two doctors are participating--one has been cooperative

---

[1] This sorting resulted in a loss of some forms. The resulting sample sizes, which varied from question to question for all items on the form, were on the order of 3,500 to 4,400 per item. The consistent proportions of worker categories in the samples were about as follows: professional, 41 percent; paid neighborhood resident, 35 percent; neighborhood volunteer, 14 percent; volunteer workers, 9 percent.

> but is too busy to participate (he has agreed to assist if no other doctors can be found). There are no health room facilities in the schools, no clinic in the county, and one doctor has refused to examine children in his office, so blood analysis was not included in the examination. A school nurse and the county public health nurse are assisting in the medical examinations.
>
> There are only two dentists in the entire county, and one of them will not examine patients younger than fourth graders, so it was impossible to schedule dental examinations by dentists. The doctors are including a mouth check as part of the medical examination, and children with obvious difficulties are referred to the dentist for treatment. It is hoped that a dental clinic will be set up before the close of the Head Start Program to treat the children on welfare. If there is a great demand for treatment, it may be possible to schedule a visit by the State mobile dental clinic. This would not be possible during the summer, however.
>
> The medical, dental, and psychological treatment needed by children in...could be provided either in...or..., but both these places are more than 100 miles away and transportation cannot be arranged. The state will not pay mileage for the public health nurse to transport the children, and thus far no volunteers are available to do this. There is also the problem of transporting preschool children, some of whom have never been out of the county, such a long distance for treatment.

Workers also rated the value of the medical and dental examinations. The distribution of opinions of the 6,320 staff members about these examinations is shown in Exhibit III-7. Although there is a high degree of approval of medical and dental examinations, these opinions can only lend themselves to ambiguous interpretation. They do not necessarily refer to what was actually done. The question on the Worker's Evaluation Form reads: "In respect to the physical and psychological health of the child and his educational development, my attitudes towards the following are: (1) Medical examination... (2) Dental examination..."

Thus, for example, those workers who checked "Not Applicable" or "Waste of Time" may have been saying in effect that there were no such examinations in their centers, or that they were not useful for any of several possible reasons.

More interesting and meaningful are selected observations of medical consultants who examined the health component of 344 Head Start

EXHIBIT III-7 MEDICAL/DENTAL EXAMINATIONS-WORKERS' OPINIONS

Workers' Evaluation Form Item Number	Percent					
	Very Much Worthwhile	Worthwhile	Occasionally Worthwhile	Waste of Time	Not Applicable	No Response
18(1). Medical Examination	74.0	17.7	2.2	.3	2.0	3.8
18(2). Dental Examination	66.5	21.0	2.8	.5	4.4	4.8

programs. These are shown in Exhibit III-8. Two items should be particularly noted, namely (1) in almost 70 percent of these programs 30 minutes or less was spent on the combined task of the completion of . 98-question medical/dental and family history records and examining the child; and (2) these consultants report fair or inadequate planning for the medical/dental program in over 50 percent of the cases.

The observations of these professionals led to several suggestions for improving the medical/dental portion of Project Head Start. Two observations are particularly noteworthy. First, since successful medical programs nearly always had a medical director designated to plan the services, mobilize the medical resources, and provide a suitable professional environment, most of the planning problems which occurred could have been mitigated by the use of a medical director early in the program development stage. However, in rural areas particularly, this is not always possible. Second, a good medical program required a strong educational component. Good health practices are a family activity and are not acquired as a result of a single physical examination. As professional medical consultants suggested, such examinations can become of significant medical service only when they are coupled with a continued follow-up with the child and family. This can only be assured by establishing organizational procedures and responsibilities to carry out this activity.

2. Daily Programs

One goal of OEO was to provide the culturally deprived child with a preschool program to develop him intellectually, emotionally, socially, and physically. Because children, whether "well off" or "disadvantaged," exhibit great diversity, it was difficult for OEO to define clearly a good program. However, certain generalizations were made about programs, and some of them were directly implemented. In the latter category was the requirement for small classes (with 15 or fewer) that OEO attempted to ensure by the processing of the grants. Where larger class sizes had been called out in the application, OEO modified the staffing and budget so that this guideline was more likely to be observed.

EXHIBIT III-8 MEDICAL CONSULTANT REPORT

		Head Start Programs That:	Percent
2.	Had medical program planned by		
		Local health officer	32.2
		Pediatrician in private practice	10.1
		Public health nurse	12.7
		Other physician in private practice	15.6
		Other	22.3
6.	Had a physician available for		
	A.	Discussions with center personnel	
		Available	40.4
		Sometimes	22.3
		Not available	30.8
		Other	2.9
	B.	Frequent or regular visits to center	
		Regular visiting schedule	11.9
		Visits when requested	29.9
		Not available	46.5
		Other	6.6
9.	Spent time taking the history and examination of each child		
		About 15 minutes	43.3
		30 minutes	25.2
		1 hour	7.2
		1-1/2 hours	2.9
		2 hours	1.1
		Longer	1.4
		Other	17.1
12.	Had reasonably complete examination		
		Records complete	49.4
		Partially complete	33.4
		Minimal recording	9.3
		Had no medical/dental information	1.1
		Had no family data	.2

EXHIBIT III-8 (Continued)

		Percent
13.	Had parents present during examinations	
	Present	20.3
	Not present	24.7
	Most parents present	29.0
	A few parents	17.7
	Other	1.7
14.	Had health education or nutrition sessions scheduled for parents	
	Once a week	9.8
	Every two weeks	19.4
	Rarely	30.8
	Not at all	32.2
18.	Had nurses spend ___ per week at center	
	Less than 2 hours	43.0
	2 to 4 hours	10.1
	5 to 10 hours	8.7
	Over 10 hours	36.6
21.	Had initial dentist visit include	
	Examination	79.9
	Prophylaxis	15.1
	Instruction	36.6
	X rays	4.9
	Other	10.1
25.	Had vision screening test conducted by	
	Volunteer	16.2
	Nurse	55.2
	Teacher	10.7
	Other	22.9
26.	Had hearing screening test performed at	
	Hearing and speech center	4.3
	Clinic	3.7
	Child development center	63.6
	Other	14.2
33.	Had adequate planning for medical/dental program	
	Excellent planning	36.6
	Fair planning	37.5
	Inadequate planning	15.6

Although from available information it is not possible to describe in detail the schedule and activities of the individual Head Start programs, some elements of these programs can be highlighted.

Generally, programs were of two types: all-day or half-day. Most all-day programs provided breakfast, lunch, and two snacks, while half-day programs provided a snack. Some half-day programs also gave breakfast to those who needed it; others provided lunch before the children returned home. All-day programs often included nap, rest, or quiet times and periods for extended outdoor play. Sometimes dancing, singing, games, and gymnastics were performed.

The daily work/play activities were usually organized so that periods of activity were followed by periods of relative quiet, with appropriate outdoor periods interspersed. Periods of activity often emphasized free-play time with teachers and teachers' aides attempting to take advantage of the spontaneous learning opportunities that such play activity provided. Teacher-directed activities included finger-painting, science projects, pet care, etc. The quiet periods included time for snacks, as well as songs, stories, and word games. Many teachers used this time to stress the improvement of verbal facility and listening skills. Finally, periods spent outdoors used playground equipment, if available, and organized games, walks, and visits. Field trips, often including parents, were part of the outdoor activity.

It was difficult to assure program content consistent with modern concepts of child development. Many of the applications received by OEO included only the most general description of the daily program to be undertaken--in some cases simply a few paragraphs paraphrasing the informational material supplied by OEO with the application forms. Even when the application showed more planning and a better grasp of such concepts, it was a problem to assure that the program as undertaken would be reflective of the proposal.

Paid and volunteer workers rated the programs in which they participated with respect to a variety of variables or characteristics. Exhibit III-9 presents a tabulation of the percentage of responses in each

EXHIBIT III-9 PROGRAM CHARACTERISTICS - WORKERS' EVALUATIONS

Workers' Evaluation Form Item Number		Percent					
		Very Good	Good	Fair	Poor	Cannot Evaluate	No Response
1.	General morale of teacher, teacher's aides and volunteers	69.9	24.6	1.9	.2	1.1	2.3
2.	Was daily schedule realistic?	37.9	49.8	6.0	.9	2.3	3.1
3.	Were there enough workers to carry out goals of the program?	42.5	36.0	12.6	3.8	2.4	2.7
4.	Relevance of curriculum to the age child	52.0	33.8	3.7	.4	5.1	5.0
5.	Cooperation from parents	30.7	43.1	16.0	2.7	4.6	2.9
6.	Facilities of the pre-school area (lighting, space, water, storage, bathrooms, etc.)	48.9	33.4	11.1	3.0	1.0	2.6
7.	Amount of available play materials	38.8	37.4	14.5	3.2	3.5	2.6

EXHIBIT III-9 (Continued)

		Percent					
Workers' Evaluation Form Item Number		Very Good	Good	Fair	Poor	Cannot Evaluate	No Response
8.	Quality of available play materials	39.3	41.1	11.2	1.9	3.7	2.8
9.	Adequacy of physical maintenance of pre-school area	36.1	41.9	12.1	3.3	2.9	3.7
10.	Quality of teaching supervision	58.1	30.3	2.6	.9	4.7	3.4
11.	How helpful to your teaching were the psychological measures and ratings you completed?	17.9	36.6	11.3	3.5	23.0	7.7
12.	Adequacy of transportation arrangements for children and parents	46.3	30.4	8.3	2.9	8.1	4.0
17.	Adequacy of amount of time set aside for parent-teacher conferences	21.3	36.0	15.0	6.1	16.8	4.8

opinion scale category or level for each question or item. The percentages are relevant to a total sample size of 6,320 respondents.

There are a number of points of interest in Exhibit III-9. The trends of opinions along the scale show that Items 11 and 17 appear to be unique when the "Cannot Evaluate" category is considered. These items, on the research instruments and on the time set aside for parent-teacher conferences, had the lowest percentage of "Very Good" ratings of any of the items. They also had the highest percentages of "Cannot Evaluate" responses. It is true that many people in the sample undoubtedly had no basis for evaluation because of their position and duties in the center, their training, etc. However, information reported in some of the independent research studies (e.g. Berlin, Pierce-Jones, etc.) indicates that there was substantial objection to some of the instruments employed.

Turning to some of the other items, there appears to have been general satisfaction with the relevance of the curriculum (Item 4); morale was high (Item 1); and the quality of the teaching supervision was considered to be generally very good (Item 10).

For all items in Exhibit III-9, significant differences (beyond the .05 level) were found between the categories of workers. On Item 4, for example, professional workers showed a significantly larger proportion of "Very Good" responses (61 percent of 1,738 respondents) than nonprofessionals, while neighborhood paid workers showed larger than expected responses in "Fair," "Poor," and "Can't Evaluate" categories. Since the evaluation item deals with a judgment about the relevance of the curriculum, more credence should presumably be given to the evaluation of the professional workers. On other items, the differences are more difficult to interpret. Thus on Item 10, fewer professionals than expected rated the quality of teaching supervision as "Very Good," while paid neighborhood workers provided this response more often than expected. None of the differences observed alter the general picture of positive opinion held by the workers.

Review and tabulation of written comments on the Paid and Voluntary Workers' Evaluation Form provided further information bearing on the evaluations in Exhibit III-9. A total of 6,433 forms were examined, with comments classified according to topic. There were 2,857 comments on different topics, most of which were favorable. The modal comment (25.6 percent) was that the children benefited. However, in a number of cases, criticisms or suggestions were made. The following percentages of categories of comments are noteworthy here:

- Parents benefited or participation was good (2.9 percent), but there was a need for greater participation of parents and/or communication with teachers (2.9 percent), and a need for more social workers and a greater contact with homes (0.7 percent).
- More or better training and/or selection of teachers' aides was needed (2.8 percent), and more staff and/or smaller groups of children were needed (2.3 percent).
- Facilities, supplies, equipment, or money were inadequate (4.0 percent).
- Planned curriculum, special work, discipline, and field trips were needed (2.0 percent).
- There was too much testing and paperwork (10.6 percent) and there was general criticism of research instruments (1.4 percent).
- Problems existed in organizing, planning, administration, etc. (4.1 percent), and transportation was inadequate (0.7 percent).

Workers were asked to express their opinions about the value of various programmatic features or activities. The results for the sample are shown in Exhibit III-10. As noted above (see subsection III.C.1), the responses do not necessarily indicate an evaluation of what was actually done in the various daily programs.

In considering all the worker opinion results, the reader should remember that the opinions reported here are for the total sample. There is no way in these data of distinguishing the center affiliations of reporting workers within an item or question. It would be of interest to know, for example, whether responses, regardless of the position of the worker, are more highly correlated for some CDC's than for others.

EXHIBIT III-10 SERVICES AND ACTIVITIES - WORKERS' OPINIONS

Workers' Evaluation Form Item Number		Percent					
		Very Much Worthwhile	Worthwhile	Occasionally Worthwhile	Waste of Time	Not Applicable	Response
18. (1)	Medical examination	74.0	17.7	2.2	.3	2.0	3.9
(2)	Dental examination	66.5	21.0	2.8	.5	4.4	4.8
(3)	Opportunity to attend school at an early age	75.1	18.0	2.5	0	1.0	3.4
(4)	Increased experience with a variety of toys and games	66.8	26.0	2.6	.1	1.1	3.4
(5)	Increased experience with a variety of books, stories, and music	74.4	19.0	2.0	.1	1.1	3.4
(6)	Trips into the community	63.6	24.2	4.2	.2	3.5	4.3
(7)	Individual attention given to each child by teacher and aides	73.3	19.5	2.5	.1	1.4	3.2
(8)	Opportunity to participate in group activities with other children	76.6	17.2	1.5	.1	1.3	3.3

A summary of the consultants' comments on the program activities illustrates some of their concern (see Exhibit III-11). This shows that in only about 55 percent of the observed cases did the consultants believe that the program met the needs of the individual child, and in only about 64 percent did they feel it met the needs of the child with special problems. While teachers and workers appear to have used facilities and materials well in the opinion of the consultants, they were less able to help the child see himself and his interests as worthy. Even field trips appeared to the consultants to lack real significance in more than half of the programs.

In a critique of the summer program, the consultants commented on the tendency to adhere to a rigid daily schedule, particularly in programs sponsored by school systems. In many of these programs, it seemed that the goal of Head Start was rather narrowly construed to be one of school readiness. At least a part of this confusion could have resulted from various statements issued by OEO that accentuated the purely educational aspects of the program.

Several independent research studies focus on the schedules and activities of selected centers. Observations of two such studies, one in Massachusetts and the other in New York, are presented here.

Dr. Elmer E. Van Egmond (Reference 105) interviewed 9 Head Start teachers (out of 17 in 12 centers) in Cambridge, Massachusetts. As a program designed to prepare culturally deprived children for entrance into kindergarten or first grade, Dr. Van Egmond noted that nothing could differentiate these programs from other preschool classes with similar ends. "Typical" days varied between programs with a complete lack of planning to more structured efforts which might include periods for show-and-tell, free play, washroom breaks, milk and crackers, outside play, and stories and music. No teacher mentioned parental involvement as part of a "typical" day. Neighborhood trips were taken; of the teachers interviewed, the median number of trips for the program was four (the maximum was seven and the minimum was one).

Van Egmond concluded that careful planning was not a program characteristic. Most of the teachers, he stated, were committed to a

EXHIBIT III-11 PROGRAM CHARACTERISTICS - EDUCATIONAL CONSULTANTS' REPORT

Consultant's Checklist Question No.	Characterization of the Overall Activity of the Staff	Percent(1)		Number of Responses
		Yes	No	
8A	Program tailored to individual child's needs	54.9	7.8	890
8B(1)	Rapport established with children as a group	90.3	0.8	918
8B(2)	Rapport established with children with special problems	64.6	6.7	916
8C	Implements a relatively unstructured program	58.9	10.4	891
8D	Implements a highly-structured program	15.8	56.4	813
8E	Believes all children should achieve specific level of goals	10.4	65.3	892
8F	Believes goals should be adapted to the individual child	65.5	5.6	908
8G	Emphasizes self-discipline and self-control	57.8	13.0	887
8H	Encourages free play and expression	59.9	6.7	907
8J	Makes effective use of materials and equipment	100.0	-	704
8K	Provides a wide variety of outdoor play activities	64.3	5.1	888
8L	Provides for significant field trips	45.2	19.6	900
8M	Provides group activities of interest and short duration	77.9	6.1	896
8R	Implements program emphasizing language development	59.0	11.0	902

EXHIBIT III-11 (Continued)

Consultant's Checklist Question No.	Characterization of the Overall Activity of the Staff	Percent[1] Yes	Percent[1] No	Number of Responses
8S	Aware of learning potential of children's play activities	69.5	4.6	894
8T	Encourages child's curiosity, spontaneity, and expression	61.1	7.2	914
8U	Accepts behavior of children from different social status	61.1	1.7	897
8V	Helps children feel accepted and good about themselves	86.5	1.7	897
8W	Exploits things and ideas to assist communication skills	80.5	1.8	903
8X	Encourages children to observe carefully things of interest to them	64.3	3.6	893
8Y	Capitalizes on different backgrounds and cultures of children	59.5	5.2	892
8Z	Helps child see himself and his interests as worthy	46.8	21.7	792
8AA	Helps children appreciate community symbols of service--policemen, firemen, etc.	76.1	2.1	897

Note: (1) Remainder of responses reported as "partial."

theory of learning through activity. Their programs included a variety of activities without specific direction or goal orientation.

Dr. John Harding (Reference 47) described and analyzed the programs of three centers in Tompkins County, New York. He stated that the programs in these communities had many similarities. Each was planned and directed by public school personnel; the staffs were all trained at one institution; and each program was intermediate (between a typical nursery and a typical kindergarten). All programs had indoor free play, snacks, structured group activities, and outdoor free play. Two of the centers operated for half-days; the two classes in the other center were for 7 hours per day.

The chief feature of one program was a change in emphasis as the program progressed. Early emphasis was placed on familiarization of the child with (1) materials, routines, and rules, (2) the child's name, and (3) conversation. Later, more formal group situations (including stories, games, music, and discussions) were stressed.

Another program featured a weekly field trip. Mothers were invited to accompany the children; there was usually one adult for every two to three children on these excursions. After the trips, follow-through activities were directed by the teachers.

In the third center, one teacher emphasized unstructured activities. For the most part, she worked around interests of the children and stressed the improvement of the child's self-image, e.g., placing snapshots of the children and their artwork on the wall. Frequent meetings with parents were also held.

The above program descriptions are not suggested as being representative of all centers, but only as illustrative of the variety of programs found among centers.

3. Social Services

Consultants were quite critical of the area of social services. Many programs included little or no use of social workers or psychologists; however, the absence of these elements, while typically the outcome of trimming during the budget process, was caused primarily by a lack of understanding of the services to be performed in this area. Applicants for grants had less understanding of the functions of the social worker and psychologist than of those of any other disciplines involved in Head Start. If this situation is to be improved so that funding of such services can be initiated, a substantial educational effort must be undertaken. Exhibit III-12 shows the workers' opinions about the availability of social services. Data are percentages of responses to those items on the Worker's Evaluation Form.

4. Parent Participation

The importance of parental involvement was clearly indicated in the Head Start literature and was also cited by consultants. Many factors of success depended on the interest and cooperation of parents. Attendance of 4-, 5-, and 6-year-olds hinged on this factor, as did needed follow-up medical and dental treatment. Further, if there was to be successful interaction within the classroom between child and teacher, direct contact between teacher and home was needed. In this way, the teacher and parent could communicate as to the specific needs of the child as an individual (and in Head Start, one goal was treatment of the child as an individual with personalized needs and interests). The parent is the first step in educating the community in child development methods. Throughout the reports of consultants ran an emphasis on the need for concomitant parent education.

Consultants most often mention parental involvement as a key element in a successful project, and at the same time this area is most often called out as a major project weakness. The consultants' comments are summarized in Exhibit III-13. These show that a particularly small percentage of parents were included in center planning activities.

At least one factor contributing to what was often thought to be a lack of parent interest, demonstrated by poor parent participation in scheduled meetings, was the heavy work schedule of parents. This problem, coupled with a lack of transportation, was especially severe in certain rural programs. Among non-Anglo parents, the more common obstacle to parent participation was language. These points should be compared with similar ones made by the workers (see subsection III.C.2).

EXHIBIT III-12 AVAILABILITY OF SOCIAL SERVICES - WORKERS' EVALUATION

Workers' Evaluation Form Item Number		Percent					
		Very Good	Good	Fair	Poor	Cannot Evaluate	No Response
15.	Availability of psychological and/or psychiatric services	12.5	21.9	12.9	11.7	34.7	6.3
16.	Availability of social service agencies	21.5	30.2	13.3	5.9	23.3	5.8

EXHIBIT III-13 PARENT PARTICIPATION - EDUCATIONAL CONSULTANTS' REPORTS

Consultant's Checklist Question Number		Percent(1)		Number of Responses
		Yes	No	
5A.	Parents' meetings are being held	61.3	23.3	914
5B.	Some parents' suggestions have been adopted by the center	31.5	51.7	849
5C.	Parents are helping to plan follow-through	23.9	59.5	843
5D.	Parents are helping to plan full-year CDC's	17.0	69.8	799
8N.	Teachers encourage parent participation in the classroom	73.4	4.2	896
8Q.	Teachers have established adequate communication with parents	90.1	1.6	892
10B.	Teachers are responsible for helping parents learn about their children	41.5	58.5	878
10C.	Teachers are responsible for helping to solve family problems	73.8	26.2	881

Programs provided for parents include:	Number of Yes Responses
Help in child rearing	878
Homemaking education	445
Consumer education	340
Other	233

Note: (1) Remainder of responses reported as "partial."

5. Staff and Workers

Staff training for the Summer 1965 program was provided by the National University Extension Association (NUEA) under contract to OEO (see Section I for background information). The goals of the training program (Reference 90) were to:

- Orient the trainees to the aims and activities of the CDC;
- Focus on physical development and health problems of economically disadvantaged children;
- Explore some of the influences of poverty on familiar relationships, particularly acculturation and self-image;
- Discuss in some depth the role of the CDC staff in their relationship to the children, parents, volunteers, and other staff; and
- Help the staff cope with the "concrete problems they are likely to encounter."

A Core Curriculum was established by OEO, consisting of seven major subject areas:

(1) Orientation to the Child Development Center concept
(2) Medical and nutritional features of the CDC programs
(3) Relationship of CDC to other social service programs
(4) Sociology of the disadvantaged
(5) Educational program and activities of the CDC
(6) Instructions on coping with problem situations
(7) Use of volunteers in the CDC[1]

The sequencing of topics and detailed curriculum content were to remain flexible, so that the individual training institutions could meet special local and regional needs. A later supplement to the curriculum concerned the testing program to be carried out by the CDC.

Exhibits III-14 and III-15 summarize several interesting characteristics of the trainees attending NUEA-sponsored sessions. They show the preponderance of women teachers who served Head Start during the summer, and they also show that most of these teachers' experience was in elementary,

---

[1] This list and the following material specific to the training program are taken from Reference 90.

EXHIBIT III-14 SELECTED NUEA TRAINEE CHARACTERISTICS

	Number	Percent
1. **Age**		
Under 21	348	1.3
21 - 25	4,620	16.9
26 - 30	3,623	13.3
31 - 45	9,878	36.1
46 - 60	7,767	28.4
Over 60	766	2.8
No reply	325	1.2
2. **Sex**		
Male	2,100	7.7
Female	23,869	87.3
No reply	1,358	5.0
3. **CDC Position**		
Teacher	23,735	86.9
Social worker	360	1.3
Physician, dentist	6	<0.1
Nurse	164	0.6
Nutritionist	57	0.2
Other paid professional	2,113	7.7
Volunteer	194	0.7
No reply	698	2.6

EXHIBIT III-15 EXPERIENCE OF NUEA TRAINEES

1. Highest level of education completed

	Number	Percent
Less than high school	25	0.1
High school	260	1.0
College		
1 or 2 years	1,131	4.1
3 or 4 years	15,744	57.6
5 or 6 years	7,723	28.3
7 or more years	1,495	5.5
No reply	949	3.5

2. College degrees held

	Yes		No		No Reply	
	Number	Percent	Number	Percent	Number	Percent
Associate	1,855	6.8	6,944	25.4	18,528	67.8
Bachelor	21,784	79.7	1,501	5.4	4,042	14.8
Masters	5,637	20.6	6,800	24.9	14,890	54.5
Doctorate	98	0.4	7,828	28.6	19,401	71.0

3. Teaching experience

	Yes		No		No Reply	
	Number	Percent	Number	Percent	Number	Percent
Preschool	9,922	36.3	6,501	23.8	10,904	39.9
Grades 1 - 3	19,312	70.7	2,247	8.2	5,768	21.1
Grades 4 - 6	11,192	41.0	4,604	16.8	11,531	42.2
Grades 7 - 9	6,458	23.6	6,453	23.6	14,416	52.8
Grades 10 - 12	3,307	12.1	7,831	28.7	16,189	59.2
College	944	3.5	8,827	32.3	17,556	64.2
Supervisory	2,330	8.5	8,102	29.6	16,895	61.8

EXHIBIT III-15 (Continued)

4. Teaching certificates or licenses

Yes		No		No Reply	
Number	Percent	Number	Percent	Number	Percent
25,045	91.6	1,505	5.5	777	2.8

5. Experience with poor children

	Number	Percent
None	6,449	23.6
1 - 5 years	8,005	29.3
6 - 10 years	3,796	13.9
11 - 15 years	2,788	10.2
16 - 20 years	2,005	7.3
Over 20 years	3,747	13.7
No reply	537	2.0

not preschool, education. Finally, although a substantial percentage of the trainees (23.6 percent) had no experience with groups of children from conditions of poverty, a larger percentage (45.1 percent) had from 6 to over 20 years of such experience.

Ratings from the trainees of how well they believed the training session had prepared them for their CDC role reveal that 53.2 percent thought they were "very well" prepared; 43.2 percent reported they were "adequately" prepared; while only 2.2 percent answered that they were "inadequately" prepared. It would have been interesting to see the results of such a question after the summer CDC programs were completed, but such data is not available.

Many teachers and administrators were reported to be enthusiastic about the less structured, child-oriented approach that was to be emphasized in Head Start. It was thought by many consultants that there would be a carryover of this enthusiasm into the classrooms in the fall when the teachers returned to their regular work. Small classes were strongly advocated and teachers' aides proved to be extremely helpful, despite initial skepticism of many professionals. As a result, it was thought that the use of teachers' aides in regular elementary school classrooms might be attempted as a means of reducing the effective class size and improving the learning experiences provided to the child.

Reports of consultants favored the training period provided for teachers prior to the opening of Head Start Child Development Centers. In many cases they attributed the successful orientation of particular programs toward modern child development concepts directly to the teacher training programs. In contrast, when teachers had not attended the training sessions, consultants were critical of what they termed "ignorance of Head Start Program goals." A summary of consultants' observations on staff training and use is shown in Exhibit III-16.

Six specific training program suggestions resulted from a consultants' workshop conference held August 30-31, 1965. They are:

- Programs should be more comprehensive. They should involve people at all important staff levels--administrators,

EXHIBIT III-16 STAFF AND WORKERS - CONSULTANTS' COMMENTS

Consultant's Checklist Question Number		Percentage of Responses(1)		Number of Responses
		Yes	No	
2A.	Formal training arranged for paid professionals	85.6	8.8	917
2B.	Formal training arranged for volunteers	27.8	54.6	864
3A.	Professional staff uses non-professionals well	80.8	3.2	890
3B.	Professional staff uses volunteers well	77.7	6.6	781
4A.	Non-professionals feel they are used well	90.9	0.8	854
4B.	Volunteers feel they are used well	85.8	4.3	735
8O.	Staff has achieved adequate working relations among professional members	53.6	17.9	899
8P.	Staff has achieved adequate working relations among non-professional members	90.8	2.8	889

Note: (1) Remainder of responses reported as "partial."

teachers, teachers' aides, professionals, etc. A "team" approach should be stressed. All teachers, regardless of past experience, need some training in Head Start child development concepts.

- Training curricula should place more stress on parent involvement, regional problems, Child Development Center structure, staff selection methods, and urban versus rural approaches. Areas without kindergartens should put more emphasis on fundamentals.
- Selection of universities should be improved. Some good ones were overlooked; others with limited capabilities were selected.
- Only one university in each state should make assignments.
- Training centers should provide evaluation follow-up sessions for trainees.
- Demonstration schools would be a helpful training device if the children involved have backgrounds similar to Head Start children.

Finally, an effort was made to determine whether differences in effectiveness, as measured by PPVT mean D-scores, could be observed between CDC's. A sample of CDC's was drawn at random from the CDC's providing the sample of matched PPVT scores, and an analysis of variance was performed. The result was that the F-ratio was not significant. Thus, although it was not possible to identify statistically different centers by this method, certain characteristics of the means and variances were of interest, especially for their implications for future experiments and tests. The data, analyses, and results are discussed more fully in Appendix F.

IV. RESULTS

A. Introduction

In preceding sections, characteristics of the communities, children, parents, and workers affected by the Summer 1965 Project Head Start were described. Also discussed were center programs, which were intended to involve not only the participants but also the communities. The results of these programs and an evaluation of their impact on the communities, children, parents, and workers are presented in this section.

The impact of Head Start on participating communities will be discussed in terms of (1) the program involvement of various community organizations, and (2) community plans for programs resulting from Head Start. Information on these topics will give an indication of community concern stimulated by Head Start.

The impact of Head Start on the 560,000 children is, of course, central to an evaluation of the project. The project is evaluated in terms of: (1) the success of the medical and dental program in locating illnesses and defects and referring them for treatment; (2) Head Start's effect on the child's cognitive development; and (3) the extent to which Head Start affected the child's psychological, emotional, and social needs. Parental participation was encouraged in all phases of the program. The extent of parental participation and its impact on the parents are analyzed here. Finally, Head Start impact is discussed in terms of the benefits of the workers' participation and their enthusiasm for the program.

B. Impact on Communities

Basic to any community action program such as Head Start is the coordination of community resources to fight poverty. In most communities served by the 1965 Head Start program, belief in the concept impelled a wide variety of organizations and individuals with special talents to donate their services. As stated in a special study of Greene County, Ohio, "...the Head Start program was designed to serve as a starting point for the development of a broadly-based, coordinated program embracing all of the major service systems and extending to all of the major concentrations of poverty in the county..." (Reference 21).

The key question, then, is whether the 1965 Head Start program was a "community program." Available information has been organized into the following groupings to answer this question:

- The extent of community organizational participation.
- The community's continuation of Head Start and/or related programs.
- Total community impact with regard to: (1) changes in participating agencies; (2) effect on school administrators and board members; (3) role of communications media; (4) family involvement in communities; (5) impact of Head Start on future county planning; and (6) measures of interagency cooperation and communication.

Before these subjects can be discussed, however, the source material for the first two items must be described. Information on the extent of community organizational participation comes from the observations of 154 educational consultants and from a study of 1965 Head Start grantees and sponsors. The analysis of the community's continuation of Head Start is based upon the consultants' observations. The measure of total community impact is a case study of a particular community.

The 154 educational consultants visited more than 1,000 Head Start projects. Some were visited before classes actually opened;

others were visited after only a few weeks of operation; and a few consultants could not call upon centers until after classes had formally closed. Because of these differences in time at which centers were visited, the responses do not necessarily describe the programs as they were finally implemented. Organizational participation, for example, could have been more or less than that anticipated early in the program. Plans for Head Start continuation could have been formulated or abandoned after the consultants' visits. The consultants' observations, then, do not necessarily reflect the full scope of community involvement in Head Start. The geographical distribution of sampled centers approximated that of all 1965 Head Start centers.

The study of grantees and sponsors was done by categorizing and totaling the organizations listed in the Approved Grants for Fiscal Year 1965. The three categories selected were (1) community organizations, (2) public schools, and (3) other. No additional categories were chosen, for in many cases the organizational title listed in the above-mentioned volume did not permit an easy categorization. Even with these three simple categories, the ordering of organizations is somewhat arbitrary. "Community organizations," in this analysis, include not only community action agencies but also citizens' clubs and other groups primarily devoted to the improvement of the community. Finally, this study is only of grantees and sponsors and not of other organizations which, short of sponsorship, may have provided substantial assistance.

1. Involvement of Community Organizations

One measure of Head Start's effect on the community is the extent to which various elements in the community participated in the program. An effective Head Start program demanded assistance not only from public schools and community action agencies, but also from medical and dental societies, welfare agencies, and service-oriented organizations. The Head Start experience, despite the short time for project preparation, was a good initial test of the community's ability to organize its resources.

Information exists only on the breadth of organizational participation. Unfortunately, the number of community-oriented organizations in a community cannot be compared with the number that actually participated. It is misleading to state, for example, that there was no medical society participating in the program in those cases, where, in fact, there was no medical society in the community. In addition, we do not know the number of organizations or committees which emerged from Head Start. This would be another excellent measure of community impact. Finally, the available data does not indicate the number of Head Start projects which received assistance from a great variety and number of organizations.

The public schools dominated the 1965 Head Start program. As shown in Exhibit IV-1, Boards of Education and public school systems were over 60 percent of the project grantees and almost three-fourths of the sponsors. This is further supported by the observations of the educational consultants (see Exhibit IV-2). They indicated that almost 95 percent of the Head Start programs had some kind of school assistance. In many instances the public schools were both grantee and sponsor. As might be expected, this was particularly true in small communities with fewer organizations. In each region the public schools accounted for more sponsors than grantees. A variety of types of organizations applied for Head Start grants, but many of these deferred to the public schools in the operation of the program.

Nonschool organizations working toward the improvement of the community received one-fourth of the 1965 grants. The percentage was highest in the Northeast (36 percent of the regional total) and lowest in the Southwest (11 percent). Nationally, only 8 percent finally sponsored programs.

Although the percentage of other organizations as grantees (14 percent) or sponsors (19 percent) was relatively small, they included a wide variety of types: private schools, churches, universities and colleges, local government units, health and welfare agencies, many school-related organizations, and other public and private organizations. Grants to these groups were greatest in the Southeast and Far

EXHIBIT IV-1 HEAD START GRANTEES AND SPONSORS BY CATEGORY

	Percent							
	National	Northeast	Middle Atlantic	Southeast	Midwest	Southwest	West	Far West
Grantees (N = 2384)[1]								
Community organizations	25	36	28	24	33	11	20	26
Public schools	61	53	61	53	57	72	69	52
Other	14	11	11	23	10	17	11	22
Sponsors (N = 2474)[1]								
Community organizations	8	12	8	11	7	6	5	7
Public schools	73	57	75	68	78	79	83	70
Other	19	21	17	21	15	15	12	23

Note: (1) "N's" may vary slightly from actual because of hand tabulation.

EXHIBIT IV-2 ORGANIZATIONS PROVIDING ASSISTANCE BY REGION (1)

Assistance from:	National	North-east	Middle Atlantic	South-east	Mid-west	South-west	West	Far West
Schools								
Number (2)	888	118	187	126	106	180	72	99
Percent Yes	94.7	95.8	95.1	89.7	94.3	95.6	97.2	96.0
Public Health								
Number	892	114	190	125	107	184	73	99
Percent Yes	88.0	86.8	93.7	89.6	82.2	84.8	86.3	89.9
Public Welfare								
Number	882	116	186	122	108	176	74	100
Percent Yes	82.8	78.4	87.6	80.3	84.3	77.3	83.8	88.0
Hospitals or Clinics								
Number	810	109	159	114	104	164	72	87
Percent Yes	59.2	84.4	39.6	57.0	61.5	60.4	45.8	57.7
Medical Society								
Number	790	95	156	110	100	168	70	90
Percent Yes	43.4	28.4	44.2	39.1	45.0	50.0	40.0	52.2
Dental Society								
Number	787	97	156	105	98	170	70	90
Percent Yes	43.5	32.0	42.9	36.2	50.0	50.0	38.6	51.1
Nursing Society								
Number	728	92	146	96	93	151	70	80
Percent Yes	27.4	26.1	28.1	28.1	30.1	25.2	20.0	35.0
Optometrists								
Number	744	93	150	101	94	155	68	84
Percent Yes	32.9	19.4	34.7	25.7	39.4	35.5	27.9	44.0
Dieticians or Home Economists								
Number	780	91	160	109	102	166	71	81
Percent Yes	53.5	38.5	75.0	56.9	45.1	53.0	50.7	38.3
Others								
Number	424	48	86	53	60	97	27	53
Percent Yes	60.1	50.0	74.4	52.8	55.0	61.9	40.7	66.0

Notes: (1) Percentage of "yes" responses to selected questions from consultants checklist.

(2) Total number of responses (yes and no).

West. These organizations sponsored proportionately more programs in those two regions and in the Northeast.

When the participation of private schools, universities and colleges, and school-related organizations is added to that of the public schools, it appears that educational organizations had almost two-thirds of the grants and were 78 percent of the sponsors. Colleges and universities in every region sponsored programs. School-related organizations with programs included parent-teacher organizations, school councils, teacher associations, and administrator groups.

Program sponsorship by churches and other parochial institutions was a very small percentage of the total (less than 1 percent). It was heaviest in the Middle Atlantic region, principally the District of Columbia.

Public and private organization participation, both as grantee and sponsor, included service clubs, sororities, unions, human rights groups, recreation councils, women's clubs, and youth commissions. More such groups participated in the Southeast than elsewhere.

Health and welfare interests were represented by such units as settlement houses, guidance clinics, mental health groups, societies for crippled and retarded children, and welfare agencies.

Thus, although the grants and sponsorships centered in the public schools, a wide variety of other organizations assumed direct responsibility for the success of Head Start programs. The breadth of community organizational sponsorship was greater, of course, in larger communities where many such groups are in existence.

Many more organizations provided assistance to individual projects while not assuming direct sponsorship. Information on the extent of this assistance comes totally from the observations of the educational consultants. The specific question given to the consultants was: "Are any of the following organizations providing assistance to the program: schools, public health, public welfare, hospitals or clinics, medical society, dental society, nursing society, optometrists, dieticians or home economists, or others?" It is assumed that the criterion for an affirmative answer to this question was (1) that there was some type of formal commitment from the organization listed, or (2) that the services were donated. The only possible responses were "yes" or "no." The number of responses varied, depending on the organization identified. As indicated in Exhibit IV-2, the greatest number of responses concerned assistance from schools and public health and welfare agencies. It is possible that the smaller number of responses to other organizational assistance was caused by the omission of a "don't know" response.

While a greater percentage of programs received assistance from schools, both public and private, than from any other community organization, assistance from public health and welfare agencies was also strong--88 and 83 percent, respectively.

The consultants observed that there was considerably less organizational assistance from hospitals or clinics; medical, dental, and nursing societies; optometrists; and dieticians or home economists. The responses to these questions, however, must be interpreted carefully. For example, in many communities assistance was provided by individual doctors, dentists, nurses, and optometrists, but not by their professional societies. There is evidence that some consultants responded affirmatively to participation by the societies if the professionals themselves assisted. In many of the smaller communities, of course, these societies do not exist.

A sampling of the consultants' narrative observations indicates that the programs varied greatly in terms of community organizational participation. At the positive end of the spectrum is a program such as that in Lowell, Massachusetts, where community involvement was extensive. For example, social clubs and businesses provided money for picnics and trips; local merchants donated food and equipment for play; service clubs gave man-hours so that the children would become acquainted with more men; the recreation department encouraged the free use of its recreation park and health camp with wading pools and playgrounds; and the Visiting Nurses Association donated services.

Some consultants felt that a few programs would have received more community assistance than they did if the Head Start directors had been more forceful and imaginative.

At the other end of the spectrum are those programs where community participation was negligible or nonexistent. Some consultants were critical of the lack of assistance from the professional societies and/or their members. A few communities had assumed that the various elements of the medical community would willingly volunteer. A consultant reported, for example, that in one community he visited the public health and welfare agencies and the nursing, medical, and dental societies donated very few services. In other communities the lack of organizational involvement was attributed to poor planning effort by the sponsor.

To the extent that measures of organizational involvement are indicative of the impact of Head Start on the communities served, the above information suggests neither extensive community participation nor complete neglect. In 95 percent of the projects a school system either sponsored or assisted the program. The educational consultants also noted strong support from public health and welfare agencies. It would seem, however, that the true measure of community impact is the extent to which other organizations participated, for they generally had not previously had as active an interest in the development of the deprived child. While many such organizations in many communities did favorably respond to the Head Start challenge, there are indications that in some areas their participation was less than had been anticipated. In these places where the program was not broadly-based, a much greater burden was placed on those units traditionally charged with the responsibility for assisting the deprived child.

2. Community Plans for Further Programs

Another measure of Head Start's impact on the community served is the extent to which elements of the community had planned to expand the program. Such expansion plans might include full-year Child Development Centers, follow-through in the elementary schools, or fall programs. The educational consultants were asked to indicate whether, at the time of their visits, such programs were being planned or contemplated. The number of responses to most of these questions was rather small (involving perhaps 70 percent of the centers visited). Respondents could answer only "yes" or "no," and it is possible that when consultants did not know or were not sure whether plans were being made, they did not answer (see Exhibit IV-3).

Over half of the 657 respondents indicated that the communities visited planned to have full-year Child Development Centers. The percentage was highest in the Far West (almost 70 percent), and lowest in the West. Many consultants stated in their narrative reports that while full-year centers were both needed and desired, their actual operation would depend on a variety of factors. The availability of funds was most frequently mentioned, followed by the availability of adequate space, transportation, and supervisory personnel. A related question concerned the availability of adequate professional staff to man the center. In each region, more than one-half the respondents answered affirmatively. There were, however, almost 100 fewer responses to this question than to the previous one, suggesting perhaps that many consultants were not informed on this matter.

With regard to Head Start follow-through efforts in the elementary schools, the educational consultants were asked two questions: (1) Is anything being done to adapt first grade or kindergarten programs to child development concepts? and (2) Have plans been made to transmit records to the school system? (See Exhibit IV-4.) The total number of responses to the first question was small, and several respondents replied that the question was not clear. The interpretation of "child development concepts" caused the most difficulty. A review of the consultants' narrative comments suggests that some replies were based upon the consultants' own understanding of child development concepts, while others assumed that the Head Start program included such concepts by definition. A few respondents answered the question by describing the program in terms of child development concepts, but they did not

EXHIBIT IV-3 PLANS FOR FULL-YEAR CHILD DEVELOPMENT CENTER(1)

	National	North-east	Middle Atlantic	South-east	Mid-west	South-west	West	Far West
Plans for full-year center								
Number(2)	657	65	136	93	89	137	61	76
Percent	51.4	40.0	55.9	51.6	39.3	57.7	34.4	69.7
Adequate professional staff available?								
Number	508	42	115	79	77	132	41	82
Percent	61.7	76.2	57.4	60.8	64.9	58.3	58.5	65.9

Notes: (1) Percentage of "yes" responses to selected questions from consultants' checklist.

(2) Total number of responses (yes and no).

EXHIBIT IV-4 PLANS FOR FOLLOW-THROUGH IN ELEMENTARY SCHOOLS[1]

	National	North-east	Middle Atlantic	South-east	Mid-west	South-west	West	Far West
Is anything being done to adapt first grade or kindergarten programs to child development concepts?								
Number[2]	534	40	109	76	63	121	43	76
Percent	56.5	75.0	42.2	67.1	54.0	61.2	46.5	61.8
Have plans been made to transmit records to the school system?								
Number	870	111	184	120	110	169	78	97
Percent	92.0	84.7	92.4	90.0	91.8	95.3	96.2	92.8

Notes: (1) Percentage of "yes" responses to selected questions from consultants' checklist.

(2) Total number of responses (yes and no).

mention whether they would be applied to elementary school situations. The "checklist" responses to the question, then, must be interpreted carefully.

Selected narrative responses, on the other hand, provide useful information as to how such concepts might be adapted and what problems might be connected with the adaptation. In Knoxville, Tennessee, for example, the consultant reported that the city school system had set up a team of program evaluators, including an educator, a psychologist, a welfare worker, a health and medical specialist, and a specialist in child development. This team was to submit its recommendations to the city school system, to be used in planning and adapting the regular first grade program. A few consultants reported that first grade and kindergarten teachers would visit the Head Start Centers to observe, and that discussion meetings would be held on the implications of the Head Start approach in the elementary schools.

Problems connected with the adaptation of child development concepts frequently concerned teachers who attempted to apply the normal first grade and kindergarten concepts to the Head Start situation. This is supported by a general feeling among consultants that neither Head Start nor public school teachers had a commanding grasp of child development concepts. Some consultants indicated that the effective use of child development concepts in the public schools would depend on the size of classes. While Head Start classes were small, kindergarten and first grade classes were likely to be large. If the adaptation of child development concepts to regular school programs is to be an objective of Head Start, then communities need guidance as to how this might be accomplished.

Over 90 percent of the respondents stated that plans had already been made to transmit Head Start records to the school system, although some consultants stated that they did not know what plans the school system had made to use them. In at least one case a consultant said that the Head Start teachers would meet with the children's new school teachers to discuss the individual records.

The existence of plans for fall programs for Head Start children is a good measure of the community's acceptance of the program. The consultants were asked whether additional programs, supplementary educational programs, medical services, social services, or parent education were planned in the fall for Head Start children. As shown in Exhibit IV-5, it appears that many programs were planned in all activities except additional programs for Head Start children.[1] However, in reviewing the narrative comments, it is observed that many consultants interpreted the question to mean the availability of programs rather than plans for their beginning. Therefore, it is probable that the responses are, for the most part, indicative of the availability of such programs and services to all persons in the community. The consultants were not asked whether the community planned any special effort to encourage Head Start participants to take advantage of these programs and services.

The available information on community plans for further programs is not sufficient to permit any firm conclusions. A review of the checklist tabulations and narratives suggests, however, that in expanding the Head Start concepts most communities exploited its educational rather than its community-involvement potential.

3. Case Study of a Community

A number of researchers and others have provided reports on the organizational, administrative, and operational aspects of Head Start programs at the local level. Various elements of information from them have been used where possible throughout this report. Since evidence about the impact of Head Start on communities is related to changes in the organization and operations of agencies and informal groups and to the development and implementation of plans and programs, it is necessary to examine these community elements in detail to evaluate effects.

---

[1] It is assumed that "additional programs" means those similar to Head Start 1965.

EXHIBIT IV-5 PLANS FOR FALL PROGRAMS(1)

	National	North-east	Middle Atlantic	South-east	Mid-west	South-west	West	Far West
Additional Programs for Head Start Children								
Number(2)	867	110	185	120	110	177	71	94
Percent	9.6	17.3	7.0	6.7	13.6	7.9	9.9	8.5
Supplementary Educational Program								
Number	661	79	143	98	82	128	53	78
Percent	53.8	41.8	51.7	57.1	40.2	63.3	49.1	67.9
Medical Services								
Number	643	65	125	99	83	133	60	78
Percent	50.5	41.5	46.4	52.5	37.3	57.1	43.3	70.5
Social Services								
Number	676	71	132	95	90	140	63	75
Percent	72.7	71.8	83.3	64.2	60.0	78.6	68.3	84.0
Parent Education								
Number	639	67	132	91	87	127	60	75
Percent	58.2	52.2	57.6	57.1	47.1	65.4	48.3	74.7

Notes: (1) Percentage of "yes" responses to selected questions from consultants' checklist.

(2) Total number of responses (yes and no).

Space does not permit presentation of all the available information. However, one report, in which a county in a midwestern state was studied in depth, is summarized here. While it will not cover all the various problems and indications of impact found throughout the country, it does provide much valuable information for planners. Since it is not the intention here to single out a given community, the names of the community and its towns have been changed. Many elements of the study are not unique to geographical location or other specific factors of identity.

The study has been summarized in three parts: (1) a description of Omega County social services prior to Head Start and the involvement of the poor in them, (2) a brief description of the origin and organization of the program for over 400 children, and (3) the impact of Head Start on various elements of the community, particularly the welfare agencies, the poor, the school system, and the county leadership structure.

In some ways Omega County may not be representative of the other counties in the 1965 program. It has the highest per capita income in the state. It was mentioned earlier in this subsection that from available evidence it appears that the majority of programs were sponsored by school systems. However, the sponsor of the Omega County program was a social welfare organization.

a. Omega County Social Services

Omega County has the usual social service agencies: health department, welfare department, child welfare board, Red Cross, two YMCA's, and the school system. Several years ago some 50 organizations formed a loose umbrella agency, the Omega County Council on Community Services. The investigator states that because of its loose organizational structure and the absence of bureaucratic characteristics, it has been effective in handling welfare problems.

More than 100 mothers from the over 300 Head Start families were interviewed to determine the extent of their community involvement and the extent to which they were served by the social service agencies. The mothers were given a list of 12 Omega County agencies and asked whether they had ever heard of them before and whether they had previously had some contact with the agencies. While the majority of respondents had heard of 11 of the 12 agencies, the majority had had some contact with only 2 of the 12: the PTA (61 percent) and the Health Department (53 percent). The investigator concludes that if the relatively involved Head Start mothers are a reliable index of participation, "... the social service facilities available in Omega County are utilized by a minority of the poor ..."

The mothers were asked whether they knew of any organizations working to solve the problems of the poor. Only 26 percent of the respondents could mention one such organization and, significantly, only three respondents mentioned a governmental body as one of these organizations. Fifty-nine percent said they would be glad to join such work, while 20 percent were negative on this point. Finally, asked whether the people in power were interested in solving the problems of the poor, 45 percent said they didn't know, 33 percent said yes, and 23 percent said no.

It would appear, then, that Omega County has a well-functioning social service structure which has not, however, been entirely successful in reaching the poor.

b. Head Start Organization

Many people in Omega County felt that the success of the summer program was due to effective leadership and organization. When asked why Omega County was different from the surrounding counties which had no program, many respondents stressed the leadership in their county (see organization chart, Exhibit IV-6).

After Omega County entered a 6-county community action agency, the Omega County Council on Community Services voted to establish a 20-member Economic Opportunity Steering Committee, two members of which were to be from the low-income neighborhoods. The Steering Committee then set up a 32-member Head Start Committee, composed of eight people from the school systems, four from the health professions,

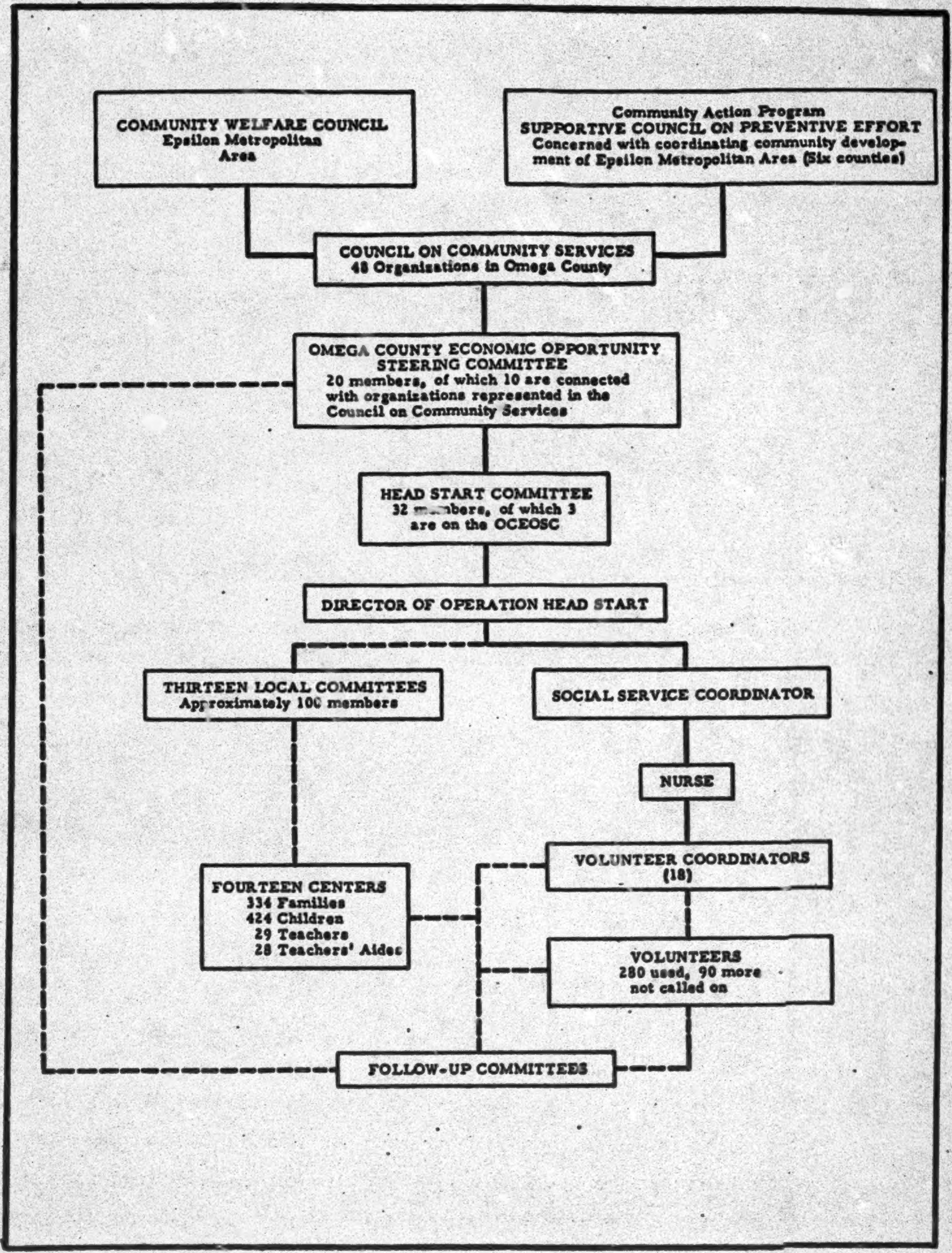

COMMUNITY WELFARE COUNCIL
Epsilon Metropolitan Area
Community Action Program
SUPPORTIVE COUNCIL ON PREVENTIVE EFFORT
Concerned with coordinating community development of Epsilon Metropolitan Area (Six counties)
COUNCIL ON COMMUNITY SERVICES
48 Organizations in Omega County
OMEGA COUNTY ECONOMIC OPPORTUNITY STEERING COMMITTEE
20 members, of which 10 are connected with organizations represented in the Council on Community Services
HEAD START COMMITTEE
32 members, of which 3 are on the OCEOSC
DIRECTOR OF OPERATION HEAD START
THIRTEEN LOCAL COMMITTEES
Approximately 100 members
SOCIAL SERVICE COORDINATOR
NURSE
VOLUNTEER COORDINATORS (18)
FOURTEEN CENTERS
334 Families
424 Children
29 Teachers
28 Teachers' Aides
VOLUNTEERS
280 used, 90 more not called on
FOLLOW-UP COMMITTEES

EXHIBIT IV-6 ORGANIZATION OF OPERATION HEAD START, OMEGA COUNTY

four from Iota State University, four from private social service agencies, four from low-income neighborhoods, and eight from various professions.

Thirteen local Head Start committees, with a total membership of 100, were organized, usually through the school superintendents. The responsibilities of these committees included identifying and enrolling participants, acting as a source for volunteers, and providing $50 to buy a food container. While many of the committees were a source of support, there were problems. Some committees did not cooperate; one had too many school people who were not available during the summer; and another had a tendency to overstructure its activities.

From the distribution of membership on these committees, it appears that there was representation from a broad segment of the social service population. The Council on Community Services had already been working for the disadvantaged, thus, the organizational channel already existed.

Community representation in the planning, however, may not have been complete. Neither the traditional social service agencies nor school district administrators were heavily involved in the planning of the 1965 program. Both groups felt that Head Start was organized by "outsiders." Some welfare personnel argued for a social service professionally organized, which emphasized the contributions of private citizens. The school administrators of local districts felt left out. It is noted that most of the local districts were not represented on the central committee; the administrators were presented with a developed program through the 13 local committees. Most of the school administrators felt that if the program were to continue, a school-related group should perhaps lead it. With regard to the 1965 effort, however, the investigator concluded that "professional procedures in most of the agencies did not encourage or facilitate extensive staff involvement in a voluntary community enterprise."

Organizationally, the 1965 Head Start program in Omega County was based on a person-oriented approach. Things were done rapidly in large part because of the personal relationships of the members of the Council on Community Services. Centrally planned and organized, it involved key elements of the local communities too late in the cycle. The researcher feels that Head Start must now be transferred to an institutional context unless preschool programs are to be divorced from the school systems entirely.

c. Community Impact

In evaluating the impact of Head Start on the community, the researcher interviewed representatives of welfare agencies and the various school systems to determine their assessment of the 1965 program, the extent of their involvement, whether they would participate in future programs, and whether plans had been made to develop programs or activities as a result of Head Start.

In general, the people interviewed considered the 1965 program to be worthwhile and believed that it should be continued. The degree of enthusiasm depended somewhat upon the individual's or the agency's extent of involvement. For example, 4 of 14 school principals interviewed had been enthusiastic about the program from the beginning; these four principals and one other had participated actively. Negative attitudes, which were in the minority, emphasized hasty planning, little involvement of the traditional institutions in the planning, the money spent in relation to local money available for such purposes, and the Federal Government's involvement in the program. Significantly, no one mentioned that Head Start had not benefited the children.

As stated above, the participation of the traditional Omega County social institutions was minimal. Staff members from 12 child-oriented social service agencies were interviewed. The majority of the traditional welfare and service units were not involved in the planning, although they did provide some material or service. Most of them had started no additional services or programs as a result of Head Start, although all but one stated that they would participate in future programs.

Among the 12 there were 2 relatively new agencies--the Gamma Human Relations Commission and the Alpha Area Council. The former was expressly formed for Head Start, and for the latter, a voluntary citizens' group, Head Start was the major project to date.

While most social service agencies were not involved in planning, health personnel were intimately involved. The Health Department was represented on the Council on Community Services and the Economic Opportunity Steering Committee. The public health nurses, the closest link between the parents of Head Start children and the social welfare agencies, all participated in the planning. Inasmuch as the cooperation of the Medical Society was crucial, members of the society were contacted and involved in the planning. Physicians and dentists gave their cooperation.

The Omega County Superintendent of Schools participated actively in the program, and it was through him that the cooperation of the local school districts was obtained. It was stated above that 5 of 14 school principals interviewed were substantially involved in Head Start, and 9 had done at least some planning. All of the principals wanted their schools and staffs to be involved in future Head Start efforts; 4 said that the involvement should be extensive.

In the local communities, only one of the representatives of seven Boards of Education said that he had been involved in the planning. In most of the districts the superintendents were passive. The investigator stated that "both the superintendents and the board members expressed an implicit attitude of resentment that they were not more extensively involved in the planning and execution of the program." Finally, although none of the board members wanted to involve their schools and staff extensively in future programs, 75 percent of the superintendents said that they would.

The Omega County political leaders were supportive but inactive. The researcher states that there is no hostility between the county political and social service structures, and that the poverty program was not considered a threat. The political leaders did not intervene, and the program developers "...deliberately did not ask for the endorsement or participation of political officials or bodies...".

Because of Omega County's loose, "nonbureaucratic" service structure, the investigator feels that new leaders were uncovered in the program and that the existing leadership incorporated these elements into the structure with little strain. It is observed, however, that few disadvantaged persons participated in the planning; when invited, they participated in the operation of the program. The leadership structure, then, did not incorporate many individuals from the "poverty sector." It was reported that the reason for this might be that, whereas the county social service leaders are oriented to county-wide problems, the poor relate only to their individual neighborhoods. The author states that the disadvantaged lack extra-county experiences and cannot participate locally because of the political dominance of conservative elements. It will be remembered that in the planning of the effort, the emphasis was on central county agencies rather than local units.

The problem of involvement of the various elements of the community remains a crucial one in Head Start. In Omega County, the traditional institutions argued that Head Start suffered from poor planning and that they, if invited, could be of valuable assistance in the early stages. A review of the educational consultants' narrative comments on other programs throughout the country suggests that in some communities the traditional institutions (i.e., school systems) did not solicit the participation of the less structured elements of the community. There is little evidence about the involvement of the disadvantaged, although the investigator says that the poor in Omega County were workers, not planners.

One measure of the impact of Head Start on a community is the extent to which new or expanded programs result from the experience. These new programs must emerge from the planning of various elements of the community. In this county it would appear that the extent to which these groups were planning such efforts was related to the extent of their involvement in the summer program.

Essentially, Omega County had three types of groups which might have been stimulated enough by Head Start to expand or begin programs.

One of these, the least traditional, was the Economic Opportunity Steering Committee. Head Start was its only major project, although others are in the planning stages.

The social service agencies (the second type) have been stimulated, it would seem, to the extent of their 1965 involvement. Of all the social service agencies, the Health Department was most involved. Since the close of the program, the researcher states, the Health Department has been considering applying for a grant to help meet some of the medical and dental needs uncovered by Head Start. The Department has also received a grant to undertake a program of homemaker training and services. Some of the active Head Start mothers will be encouraged to apply.

Although the Beta Township Welfare Association's initial reaction was negative, it did participate in the provision of clothing for some children and in identifying Head Start eligibles. The researcher feels that the impact of Head Start had an influence on one new program--the establishment of a neighborhood center. As a staff member said, "When Head Start came along, they felt that if one can do this, let's see how far we can go." The Alpha YMCA was planning to offer selected Head Start parents a sponsored membership. The Gamma Human Relations Commission was planning a summer day camp to involve Head Start children, and the Alpha Area Council was planning a day-care center.

From the child's standpoint, the plans of the school system for future programs are probably most important. It is possible that the limited involvement of school personnel in the planning stages, while not harming the success of the summer program, engendered an apparent lack of enthusiasm for continuing programs in the schools.

Perhaps the greatest positive effects on the school administrators were attitudinal. Several indications of willingness to cooperate were noted. For example, after the program was over, administrators from every district met to discuss future county-wide cooperation on programs funded by the Federal Government. The Head Start director said that it was the first time in his 34 years in Omega County that all the educational agencies had been together under one roof.

A second attitudinal change was observed by the Head Start director. He saw a willingness on the part of the County Board of Education to expand and initiate kindergarten programs in county schools. Feeling that preschool education will be a part of the public school system by 1975, the director stated that Head Start had an impact on the Boards of Education in preparing them for the inevitable.

Most of the principals interviewed supported the introduction of new programs designed to meet the needs of disadvantaged children, but they felt that they should be expansions of existing programs or new programs and should not be specifically directed towards the disadvantaged child.

Every responding Head Start teacher reported beneficial and positive gains in teacher proficiency, with 65 percent saying that their methods or curriculum had changed. The investigator feels, however, that in most cases the changes were mainly attitudinal. He assumed that if the communication among Head Start and non-Head Start teachers were extensive following Head Start, and if the non-Head Start teachers adapted or adopted some of the program's unique features, then the impact upon the school systems would be substantial. While it is too early to measure the full impact of Head Start on teachers and curriculum, the study suggests that the impact was minimal. Fifty-two percent of the non-Head Start teachers reported at least one conversation with a Head Start instructor on the program. All but one of the Head Start teachers said that they had had discussions; 7 out of 10 said that they had talked with six or more persons; 67 percent said that the other teachers were enthusiastic; and 63 percent said that they had discussed the program with their principals.

While 12 of the 14 principals interviewed said that they had talked with one or more teachers about Head Start, only 3 of them said it had been discussed at teachers' meetings, and 6 mentioned talking about it at meetings of principals and superintendents.

There is no indication that some of the more significant aspects of the Head Start program, such as more extensive field trips, the use of teacher's aides, or health education, had been begun in the schools. Whether the state restricts curricular innovations is not known.

Finally, there were certain goals of the 1965 Omega County program which emphasized the ongoing aspects of Head Start, but which were not met. It had been stated, for example, that parental-neighborhood involvement would be maximized. Plans included the establishment of a family life education program. This was quietly deemphasized. The Head Start director said, "We involved the families only incidentally and there has been a little follow-up, but a very little, since that time in terms of the families." With so little time, Head Start was geared primarily to the children.

It was stated in the county's proposal that public health nurses would work with families and appropriate community resources to correct defects discovered. The Head Start families interpreted this to mean that there would be an extensive medical follow-up program. There was, however, little follow-up.

It was also stated that the Coordinator of Social Services would be responsible for referrals to community resources and for the preparation of records for sharing with the local public health nurse, the Welfare Department case worker, and the local school staff. These latter groups were to continue the long-run relationships with the children and their families. At the end of Head Start, a 2-day conference was planned in which the county agencies were to review the progress of the children and the involvement of their families and plan for the continuity of the program. This goal proved to be too ambitious. Since there was a general antipathy towards the forms, the records collected were inadequate. Some coordinates were inadequately trained. In many cases the records were not made available to the agencies that needed them. The conference was not held, and agency personnel indicated little or no post-Head Start contact with children in the program or their families.

The investigator adds that he has stressed some of the negative aspects of the program only to suggest areas for improved program planning. Overall, he feels that the Head Start program in Omega County was an outstanding success.

In conclusion, it seems safe to say that the program's success was due in large part to its leadership. It was a person-oriented approach, and the social service structure in the county permitted it to function with ease. The school administrators admitted that, in the time frame, they could not have planned and operated such a program. These administrators, however, saw Head Start's most positive benefit as the adjustment of the child to the school and peer situation. It will be remembered that the Head Start director observed that the county school administrators, as a result of Head Start, may be willing to begin and expand kindergarten programs. The investigator feels that if the goal is primarily one of school readiness, then future Head Start programs must pass from individual to institutional leadership, and a school-related group may be the best solution.

Head Start in Omega County generally received a passively positive endorsement from the traditional community institutions. While certain important changes in operation or behavior were noted, these institutions did not participate actively in the planning, and they have not begun or expanded many programs as a result of the Head Start experience. There are a number of reasons why they have not. It is possible, for example, that their lack of involvement contributed to their relative lack of enthusiasm for follow-on efforts. In addition, it appears that, in the time frame of the program, the follow-on plans were too ambitious, or were at least thought to be.

The investigator rightfully cautions, however, that it is too early to measure the true impact on the community:

> It must be assumed that the growing awareness of a community to the needs of the disadvantaged, and the commitment to provide services to meet those needs, is a cumulative process in which no one program is the major contributing factor.

Each of the 1,492 counties participating in the 1965 program is, of course, different. The problems faced by Omega County and the lessons learned there undoubtedly are not universally applicable, nor were many problems occurring elsewhere encountered in Omega County. It is suggested, however, that some of the issues raised might be explored further to provide local communities with assistance or guidance on effective organization, planning, and community involvement.

C. Impacts on Children

One of the most important aspects of an evaluative summary of the Summer 1965 Head Start program must concern the effect or impact of the Head Start experience on the children who attended the program.

Several major areas of impact can be identified: health; cognitive and general development; and psychological, emotional, and social development. All areas are intimately related to school readiness; in fact some investigators used instruments specifically designed to evaluate growth in school readiness per se. The various school readiness studies have been included in the discussions of the specific areas to which they relate.

In an attempt to shed light on Head Start's impact, OEO specified a number of measurements to be made on Head Start children early in the program (pretests) and at the end of the program (posttests). In order to supplement the OEO measurements, the Head Start Research and Evaluation Section, under the direction of Dr. Edmund Gordon, funded 43 independent studies to evaluate and/or describe Operation Head Start. Twenty-four final reports and 15 preliminary ones have been received to date. The four remaining reports will be available shortly.

This subsection includes all available appropriate data on Head Start's impact on participating children and constitutes an assessment of the Summer 1965 program. (It should be noted that any evaluation of Head Start undertaken immediately following the program can, in one sense, only be considered "preliminary." Researchers appreciate the necessity for longitudinal studies to follow the progress of Head Start children beyond the end of the program.)

Before any meaningful assessment of evaluation data can be undertaken, some mention must be made of the general problems in testing culturally disadvantaged children. Several of the many possible sources of variance in test scores mentioned by Cronbach (Reference 24) seem especially to apply to culturally disadvantaged children--factors such as "testwiseness," ability to solve problems of the general type presented in the particular test, self-confidence, health, and rapport with the tester (page 128).

In "Guidelines for Testing Minority Group Children" (Reference 45), several critical issues in test administration and interpretation are discussed. One of the points emphasized is that "the validity of [test] interpretation is strongly dependent upon an adequate understanding of the social and cultural background of the group in question" (page 130). Frequently the test performance of children from low socioeconomic backgrounds may be affected by their being "less verbal, more fearful of strangers, less self-confident..., [and] less exposed to intellectually stimulating materials in the home..." (page 132).

Pettigrew (Reference 85, page 7), in discussing the factor of the tester's race, pointed out that Negro children as young as 2 years of age showed restricted verbal responses when tested by a white person. It would seem that even under the best of circumstances, testing Head Start children would be a difficult task. But in addition to the problems described above, there was some evidence that a further complication lay in the feelings of the teachers. In an evaluation of the program by the Head Start staff (Worker's Evaluation Checklist), some teachers expressed great frustration over the testing requirements and many felt that too much time was diverted from teaching to testing. Many of the 450 Head Start consultants indicated in their comments that the burden of testing was often perceived by the teacher as being greater or less, depending on the amount of additional administrative and clerical help available.

One of the researchers, Dr. Stanley I. Berger (University of Rhode Island), commented on the poor conditions for testing and the fact that teachers often misinterpreted the purpose of testing (Reference 5). Some teachers approached the test instruments with the apprehension that their results would be attributed to the effectiveness of their teaching; others believed that the results might be used to describe the "poor" children as "inferior." It was also noted that: "Children were taken away from playing games and snack time, which they were enjoying... in many cases, testing was done in spite of the teacher's help, rather than with the teacher's help." Berger's observations may apply to other independent studies as well as to the standard scheduled Head Start testing.

The numerous problems that normally arise in testing "minority groups," plus the mechanics and scheduling of Head Start tests, may account in large part for incomplete and unusable test data and must be considered in the interpretation of all test results.

1. Health

Probably the greatest impact of Head Start in the health area was felt by those children who had never previously received complete medical and dental evaluations.

The medical/dental data from the 1-percent sample indicate that, as a result of the Head Start examinations, a number of referrals were made for vision, dental, and speech and hearing problems (see Exhibit IV-7). However, except in the case of dental problems, the referral rate was very low according to the data tabulated.

The report of the Chicago Public Schools Head Start program (Reference 1) indicated that 36 percent of the 11,553 children examined were referred for further diagnosis and/or treatment. Thirty percent of the referrals involved children with varying degrees of apparent "retardation that might impair normal school progress;" 60 percent involved children with aggressive tendencies; and 10 percent involved children who were making a poor adjustment to school.

The Chicago Head Start report by Drs. Abrams and Spaeth (Reference 1), which detailed the Chicago Head Start medical program, suggested that one impact of the medical program was inherent in the fact that medical records were initiated for so many children, and that there was time during the examination for parents to ask and receive answers to questions. (In Chicago all children were accompanied by a parent to an equipped clinical facility for the medical examination.) Another impact reported by Abrams and Spaeth involved the identification of medical problems, a prerequisite for referral of such problems; apparently the thoroughness of the Chicago medical examinations resulted in a very high detection-of-defect rate.

EXHIBIT IV-7 HEALTH REFERRALS(1)

Item Number	Percent Total	Percent White	Percent Negro
32G. Visual Screening - Referral			
Unsatisfactory	.9	.7	1.2
Unsatisfactory, referred for retesting	3.4	3.2	3.4
No referral	38.8	43.3	39.8
Referral for further diagnosis or treatment	2.9	37.7	2.9
33C. Dental Examination - Referral			
No referral	33.7	13.3	15.9
Referral or plan for additional dental care	23.7	10.3	10.3
Other	1.1	.6	.4
Unknown	41.3	16.5	15.3
40C. Hearing - Referral			
None	45.4	49.8	46.1
Hearing and speech center	.8	1.1	.8
Otolaryngologist	.5	.8	.1
Other	1.1	1.2	1.1
Unknown	52.2	47.1	51.9

Note: (1) N = 6,309.

The report on the Head Start program in the San Diego City schools (Reference 10) indicated that approximately 200 health referrals were made for the 20 Head Start classes which handled 544 children throughout the summer.

As has been indicated in subsection II.C.3 which describes the health of the Head Start children as determined by the medical and dental examinations, there is considerable evidence that the medical services varied widely from program to program. These variations in quality of service would quite naturally affect the impact of the services on the health of the children.[1] However, the *potentiality* of the overall health services' benefits for Head Starters was succinctly described in the following statement made by Mrs. Gertrude Boyles and included in Dr. Allen Soule's report on Northfield, Vermont (Reference 99): "They were prepared not only from a readiness standpoint, but also from one of health; they had been checked from top to bottom, had all shots brought up-to-date, aching teeth attended to, and glasses where needed. For the first time in Northfield's history, all first graders could start off on somewhat the same equal ground."

2. Cognitive Development

There were two major sources of information on cognitive development during Head Start--the independent research studies and the 1-percent sample. The 1-percent sample was of special importance because it was intended to reflect a nationwide, representative picture drawn from the total sample of 560,000 Head Start children who were to be pretested and posttested[1] on both the Peabody Picture Vocabulary Test (PPVT)[2] and the Preschool Inventory (PSI)[3].

---

[1] A related impact, really more pertinent to the communities' area, probably resulted because this was the first time that many schools and medical organizations had to address themselves to organizing a program of comprehensive medical services.

a. PPVT, 1-Percent Sample

One measure of the impact of Head Start on children is the difference between the pretest and the posttest PPVT mean scores. This section of the report deals exclusively with those children in the 1-percent sample on whom both pretest and posttest PPVT scores were obtained. The total sample size was 634. The pretest raw mean PPVT score for the total sample was 47.6, while the posttest raw mean PPVT score was 52.9. This difference of 5.3 raw score points is statistically significant beyond the 5-percent level of confidence. However, a comparison of these means with means reported in independent studies (see Exhibit IV-8) indicates that the total 1-percent sample pre- and posttest means are somewhat higher than for these studies. Thus, there is reason to believe that there was a strong but indeterminate selection bias producing the available 1-percent sample of PPVT matched pretest and posttest scores, although there could be selection biases in the opposite

---

[1] It should be noted that pretests and posttests were to be given during the Head Start program, with at least a 4-week interim between tests.

[2] The PPVT is a test of verbal ability which does not require a verbal response; for example, the examiner shows the child a page containing four pictures and asks the child to point to the picture of the "table." There are 150 possible pictures to identify; the "raw score" is the number of correctly identified pictures and can be converted into a Mental Age (MA) or Intelligence Quotient (IQ) equivalent. Because the standardization sample for the PPVT was comprised of a geographically and racially restricted population (4,012 white children in the Nashville, Tennessee, area), many investigators reported only the raw scores and expected the reader to compare the raw score with its approximate Mental Age equivalent obtained from the standardization sample.

[3] The Preschool Inventory is a measure of school readiness developed especially for Head Start by Dr. Bettye Caldwell and Mr. Donald Soule (New York State University at Syracuse). The original test as used in the Summer 1965 Head Start program contained 161 items with a possible total score of 315. See Appendix A for a copy of the instrument.

EXHIBIT IV-8 PPVT MEAN RAW SCORES (NINE STUDIES)

Study Source	N	Chronological Age Mean	Pre-test	Standard Deviation	Post-test	Standard Deviation	Difference	Standard Deviation of Difference
1-percent sample	634	5-8	47.6	14.7	52.9	13.82	5.23*(1)	10.02
Eisenberg	424	5-0(2)	32.6	12.33	36.8	10.82	4.2*	
Horowitz	23	5-2	39.6	9.5	44.6	7.8	5.0*	
Johnson	79	5-2	34.8	17.75	39.0	17.38	4.2*	
Fishman	37	5-2			34.7			
Ozer	65	5-1	35.9	11.97	41.6	11.67	5.79*	
Pierce-Jones	126		45.9		47.9		1.92*	
Berlin	141	5-4	44.0					
Porter	33	5-0(2)	48					

Notes: (1) Asterisk (*) indicates reported statistically significant.

(2) Approximation.

direction in the independent studies' scores. A more detailed discussion of the possible sources of bias in the 1-percent sample is given in subsection II.F. While these considerations jeopardize both internal and external validity (Reference 15), there are interesting aspects of the data. One- and two-factor analyses were made of data in an effort to assess the effect of the treatment--Head Start experience--and its interaction with various characteristics of the children.

Two types of analyses were made: analysis of differences, and analysis of covariance. The models and procedures for these analyses are given in Appendix B and will not be repeated in detail here. The results for a set of factors and factor levels similar to those presented in subsection II.C.4 are summarized in Exhibits IV-9 through IV-28.

Of the two types of analysis, analysis of covariance is probably the more accepted since, by holding starting level of performance statistically constant, it eliminates a bias favoring the lower scoring groups on the pretest (cf. discussion by Lord, Reference 70). The two methods of analysis can lead to quite different conclusions. Both are included here because some comparative points of interest in the results have emerged.

Results of both types of analyses for 1-factor classifications of the sample of matched pre/post test scores are summarized in Exhibits IV-9 through IV-18. The tables are compact, in order to display the greatest amount of useful interpretive information in a single area. Since they present data in a format that is not standard, a detailed description will be made of the contents of the first exhibit in the series. The other 1-factor exhibits are identical in form.

Exhibit IV-9 shows the results of analyses of gains when the scores are grouped by age. Levels of this factor are named in the left-hand column. In the next column, the sample sizes for each level and for the total factor sample are shown. Next, there is a set of three columns collectively labeled "Means." Pretest means (repeated from subsection II.C.4) are given for each level in the column so labeled. In the next column, the difference (D-score) of pretest and posttest means for each level is given. An asterisk next to a difference score indicates that the

EXHIBIT IV-9 COMPARISON OF PPVT SCORES BY AGE

		Means			Difference				
					A	B	C	Total	
Age	N	Pre-test	Pre/Post Difference	Regressed Difference	Regressed Difference			Pre/Post Difference	Regressed Difference
A. Less than 5 years	93	37.38	4.42*(1)	13.16	X	-3.33*	-3.33*	-.29	-2.22*
B. 5 years	354	48.17	5.23*	16.49	-.81	X	0	.52	1.11*
C. 6 years or older	187	51.42	4.47*	16.49	-.05	.76	X	-.24	1.11
Total	634	45.66	4.71*	15.38	Pre/Post Difference				

Note: (1) Asterisk (*) indicates $p < .05$.

EXHIBIT IV-10 COMPARISON OF PPVT SCORES BY RACE

					Difference				
		Means			A	B	C	Total	
Race	N	Pre-test	Pre/Post Difference	Regressed Difference	Regressed Difference			Pre/Post Difference	Regressed Difference
A. White	270	50.9	4.8*(1)	16.74	X	.80	2.76	0.8	1.19
B. Negro	313	44.9	5.5*	15.94	-.7	X	1.96	1.3	.39
C. Other	8	50.8	2.1	13.98	2.8	3.4	X	-2.0	-1.57
Total	591	48.8	4.1*	15.55	Pre/Post Difference				

Note: (1) Asterisk (*) indicates $p < .05$.

EXHIBIT IV-11 COMPARISON OF PPVT SCORES BY SEX

					Difference			
			Means		A	B	Total	
Sex	N	Pre-test	Pre/Post Difference	Regressed Difference	Regressed Difference		Pre/Post Difference	Regressed Difference
A. Male	301	48.9	5.2*(1)	16.66	X	.65	0	.32
B. Female	320	46.3	5.2*	16.01	0	X	0	-.33
Total	621	47.6	5.2*	16.34	Pre/Post Difference			

Note: (1) Asterisk (*) indicates $p < .05$.

EXHIBIT IV-12 COMPARISON OF PPVT SCORES BY FAMILY INTACTNESS

		Means			Difference					
					A	B	C	D	Total	
Family Intactness	N	Pre-test	Pre/Post Difference	Regressed Difference	Regressed Difference				Pre/Post Difference	Regressed Difference
A. Mother and father	425	48.7	4.7*(1)	16.12	X	.02	1.87	-2.05	-0.3	- .04
B. Mother only	121	45.4	5.4*	16.10	-0.7	X	1.85	-2.07	0.4	- .06
C. Father only	19	51.1	2.3	14.25	2.4	3.1	X	-3.92	-2.7	-1.91
D. Other	33	45.1	7.7*	18.17	-3.0	-2.3	-5.4	X	2.7	2.01
Total	598	47.6	5.0*	16.16	Pre/Post Difference					

Note: (1) Asterisk (*) indicates $p < .05$.

EXHIBIT IV-13 COMPARISON OF PPVT SCORES BY HOUSEHOLD SIZE

		Means			Difference			
					A	B	Total	
Household Size	N	Pre-test	Pre/Post Difference	Regressed Difference	Regressed Difference		Pre/Post Difference	Regressed Difference
A. More than 8	106	45.6	4.8*(1)	15.40	X	-1.16	-0.2	-.58
B. 8 or less	528	48.1	5.3*	16.56	-0.5	X	0.3	.58
Total	634	46.8	5.0*	15.98	Pre/Post Difference			

Note: (1) Asterisk (*) indicates $p < .05$.

EXHIBIT IV-14 COMPARISON OF PPVT SCORES ON THE BASIS OF WHETHER THE MOTHER WORKS

					Difference			
		Means			A	B	Total	
Mother Works	N	Pre-test	Pre/Post Difference	Regressed Difference	Regressed Difference		Pre/Post Difference	Regressed Difference
A. Yes	215	47.8	5.3*(1)	16.40	X	.32	.2	.16
B. No	348	47.6	5.0*	16.08	.3	X	-.1	-.16
Total	563	47.7	5.1*	16.24	Pre/Post Difference			

Note: (1) Asterisk (*) indicates $p < .05$.

EXHIBIT IV-15 COMPARISON OF PPVT SCORES BY URBANIZATION

		Means			Difference					
					A	B	C	D	Total	
Urbanization	N	Pre-test	Pre/Post Difference	Regressed Difference	Regressed Difference				Pre/Post Difference	Regressed Difference
A. Urban	383	46.1	5.3*(1)	16.15	X	.49	-.87	2.14	0.9	.44
B. Farm	47	53.4	3.2*	15.66	2.1	X	-1.36	1.65	-1.2	-.05
C. Rural, nonfarm	159	50.4	5.3*	17.02	0	-2.1	X	3.01	0.9	1.31
D. Other	22	43.3	3.9	14.01	1.4	-0.7	1.4	X	-0.5	-1.70
Total	611	48.3	4.4*	15.71	Pre/Post Difference					

Note: (1) Asterisk (*) indicates $p < .05$.

EXHIBIT IV-16 COMPARISON OF PPVT SCORES BY INCOME

		Means			Difference										
					A	B	C	D	E	F	G	H	I	Total	
Income	N	Pre-test	Pre/Post Difference	Regressed Difference	Regressed Difference									Pre/Post Difference	Regressed Difference
A. Less than $1,000	48	43.5	5.6*(1)	15.82	X	-1.13	-1.11	1.04	.77	-.54	1.59	-4.72	-12.28	-1.1	-1.82
B. $1-1,999	97	46.5	6.1*	16.95	-0.5	X	.02	2.17	1.90	.59	2.72	-3.59	-11.15	-0.6	-.69
C. $2-2,999	150	48.0	5.7*	16.93	-0.1	0.4	X	2.15	1.88	.57	2.70	-3.61	-11.17	-1.0	-.71
D. $3-3,999	83	48.0	3.6*	14.78	2.0	2.5	2.1	X	-.27	-1.58	.55	-5.76	-13.32	-3.1	-2.86
E. $4-4,999	60	48.0	3.8*	15.05	1.8	2.3	1.9	-0.2	X	-1.31	.82	-5.49	-13.05	-2.9	-2.59
F. $5-5,999	42	52.0	4.2*	16.36	1.4	1.9	1.5	-0.6	-0.4	X	2.13	-4.18	-11.74	-2.5	-1.28
G. $6-7,999	31	53.1	1.8	14.23	3.8	4.3	3.9	1.8	2.0	2.4	X	-6.31	-13.87	-4.9	-3.41
H. $8-9,999	5	49.4	9.0	20.54	-3.4	-2.9	-3.3	-5.4	-5.2	-4.8	-7.2	X	-7.56	2.3	2.90
I. $10,000 or more	3	34.7	20.0*	28.10	-14.4	-13.9	-14.3	-16.4	-16.2	-15.8	-18.2	-11.0	X	13.3	10.46
Total	519	47.0	6.7*	17.64											

Pre/Post Difference

Note: (1) Asterisk (*) indicates $p < .05$.

EXHIBIT IV-17 COMPARISON OF PPVT SCORES BY REGION

		Means			Difference								
					A	B	C	D	E	F	G	Total	
Region	N	Pre-test	Pre/Post Difference	Regressed Difference				Regressed Difference				Pre/Post Difference	Regressed Difference
A. Northeast	56	46.74	1.67	12.59	X	-4.83	-3.58	-3.86	-5.91	-4.73	-5.64	-3.62	-4.08
B. Middle Atlantic	210	52.90	5.06*(1)	17.42	-3.39	X	1.25	.97	-1.08	.10	-.81	-.23	.75
C. Southeast	151	48.67	4.80*	16.17	-3.13	.26	X	-.28	-2.33	-1.15	-2.06	-.49	-.50
D. Midwest	65	43.07	6.38*	16.45	-4.71	-1.32	-1.58	X	-2.05	-.87	-1.78	1.09	-.22
E. West	12	55.30	5.58*	18.50	-3.91	-.52	-.78	.80	X	1.18	.27	.29	1.83
F. Southwest	101	44.93	6.82*	17.32	-5.15	-1.76	-2.02	-.44	-1.24	X	-.91	1.53	.65
G. Far West	39	49.16	6.74*	18.23	-5.07	-1.68	-1.94	-.36	-1.16	.08	X	1.45	1.56
Total	634	48.68	5.29*	16.67				Pre/Post Difference					

Note: (1) Asterisk (*) indicates $p < .05$.

EXHIBIT IV-18 COMPARISON OF PPVT SCORES BY FAMILY INCOME (TWO LEVELS)

		Means			Difference			
					A	B	Total	
Income	N	Pre-test	Pre/Post Difference	Regressed Difference	Regressed Difference		Pre/Post Difference	Regressed Difference
A. Less than $3,000	295	46.75	5.83*(1)	16.76	X	1.37	.98*	.69
B. More than $3,000	224	49.29	3,87*	15.39	1.96*	X	-.98*	-.68
Total	519	48.02	4.85*	16.07	Pre/Post Difference			

Note: (1) Asterisk (*) indicates $p < .05$.

difference from zero (H_0: D = 0) is statistically significant at the .05 level. In the case of age, all three differences are significant. This is generally true for all factors and most levels. All differences are positive and most are significant. At the bottom of the column is the average pre/post difference ($D_{..}$) for the factor. In the next column, labeled "Regressed Difference," is listed the difference (α-score) for each level when the postscores are regressed on the prescores. Again, the mean regressed difference ($\alpha_{.}$) for the factor is shown at the bottom of the column.

The final block of columns is labeled "Difference." The first column in that block is identified by the letter designations of the age factor levels. Thus, the column contains interlevel differences. The column is, in fact, a matrix. The top half, labeled "Regressed Difference," contains the differences of the regressed differences of different factor levels from each other (e.g., $\hat{\alpha}_A - \hat{\alpha}_B = 13.16 - 16.49 = -3.33$). The X's in the column are simply intended to separate the two halves of the matrix. The asterisks again indicate a significant difference in the absolute regressed gains between the children of the two age levels (A. less than 5 years old, and B. 5 years old). These are main effects. As the exhibit shows, the differences, adjusted for pretest level, between the two older groups (B and C) are identical.

The bottom half of the matrix, labeled "Pre/Post Difference," gives the differences of the unadjusted D-scores between levels. Thus, $D_A - D_C = 4.42 - 4.47 = -.05$. The difference is not significant at the .05 level. The interpretation is the same as for the regressed differences.

The final two columns, collectively labeled "Total," give the difference of the differences from their mean unweighted difference for unadjusted and adjusted gain scores. The unadjusted differences are listed in the next to last column, labeled "Pre/Post Difference." For each level the difference is simply the level D-score minus the total unweighted D-score. Thus, for the first level, $D_{.j} - D_{..} = 4.42 - 4.71 = -.29$. The subscript dot signifies a mean. The absence of an asterisk indicates that there is no significant difference between differences from the mean unweighted difference for the sample. A significant difference of a difference would imply a differential treatment effect. The group means are not, of course, independent of the total mean. However, the analysis has taken that dependence into account (see Appendix B). It may be seen in Exhibit IV-9 that none of the pre/post differences of differences was significant. The interpretation is that, as measured by simple gain scores, none of the age levels showed significantly greater or smaller gains than the others.

In the final column, labeled "Regressed Difference," are the differences of regressed differences from the average regressed difference for the sample (e.g., for Level A: $\hat{\alpha}_j - \hat{\alpha}_. = 13.16 - 15.38 = -2.22$). As in all other cases, an asterisk signifies a significant difference at the 5-percent level.

An overall interpretation of Exhibit IV-9 would be as follows:

- There was a significant difference between pretest and posttest means for each age level.
- There was no age effect observed when change was measured by D-scores; mean pre/post difference scores for the three age levels were not significantly different from each other.
- For adjusted gains (α- scores), there appeared to be an age effect; the gain of the youngest group was significantly different from and smaller than the regressed gain of either of the other groups.
- There was no observed differential effect (or interaction) of the treatment (exposure to Head Start defined by the pre/post interval) associated with age when the dependent variable was measured by D-scores.
- There was a differential effect of the treatment associated with age when a regression effect is taken into account.
- The youngest age group, which had the lowest pretest mean score (as would be expected), improved significantly less

in terms of α - scores than expected when a presumed regression bias is eliminated.

In Exhibit IV-10, results are presented for a classification of scores by race. Exhibits IV-11 through IV-17 summarize the results of analyses for sex, family intactness, household size, whether mother works, urbanization, income, and regionality, respectively. Exhibit IV-18 gives results for the income factor when only two levels are considered.

Findings in the 1-percent sample 1-factor analyses of change scores may be summarized as follows:

- Differences between posttest and pretest means for all factors and factor levels were positive and in most cases significant at the .05 level.
- With the exception of age and income (two levels only), there were no obtained main effects of the experimental variables either for D-score or α-score measures of impact; the magnitudes of absolute difference (D-scores) or regressed difference (α-scores) between levels within a factor were not significantly different from each other.
- With the exception of age and income (two levels only), there were no obtained differential effects of the program treatment (as defined by experience during Head Start between pretest and posttest) either for differences of differences, or for differences of regressed differences; that is, the analyses did not provide a basis for rejecting the hypothesis that the 2-way interaction (Group x treatment) = 0.
- There was a significant main effect of age and income (less than $3,000 versus $3,000 and over) for both D-score and α-score measures.
- There was a differential effect of treatment on age level for α-score measures, but not for D-score measures; the youngest age group had a significantly low difference of

regressed differences (α- scores), but they did not have a significantly different difference score (D-score) from the other two age levels.

- o The subjects from lower income levels had a significantly larger D-score than the higher income group, and it differed significantly from the total group unweighted average difference score; however, there was no significant difference between groups when regressed differences were used as the dependent variable.

Results for a number of 2-factor analyses are given in Exhibits IV-19 through IV-28. These analyses, for reasons described in Appendix B, use the regressed difference of posttest means on the total matched and unmatched pretest means as the dependent variable. The exhibits summarize the results of this analysis of an n x m factorial design in a manner somewhat similar to that used with the 1-factor analyses. Analyses of posttest means were also made.

Consider Exhibit IV-19, which shows the results of a comparison of PPVT scores by income and race. The two factors and factor levels are identified by name, and the sample size and posttest mean for each cell is listed. Row and column sample sizes and unweighted means are also listed. The numbers identified as differences are not the regressed differences calculated for cells, rows, and columns. Rather, they are the least squares estimates (LSE) of the cell row and column effects. An asterisk indicates that a component is significant at the .05 level. Thus, the presence of an asterisk indicates a significant row, column, or row x column interaction with respect to posttest means and differences. The same analyses were made of regressed differences. A plus (+) in a cell, row, or column has the same meaning as an asterisk, but with reference to regressed differences instead of posttest differences of means. LSE's for regressed difference components are not shown.

One point worth noting in the 2-factor tables is the substantial further loss of scores.

In Exhibit IV-19, data for the classification of subjects by race and income is presented. It was necessary to combine Negro and Other

EXHIBIT IV-19 COMPARISON OF PPVT SCORES BY INCOME AND RACE

	RACE								
	White			Other			Total		
Income	N	Mean	Difference	N	Mean	Difference	N	Mean	Difference
Less than $1,000	8	49.50	-1.20+(1)	28	45.93	1.20 +	36	47.72	-5.52*(1
$1-1,999	21	61.29	4.24*	34	46.85	-4.24* +	55	54.07	.83
$2-2,999	52	57.65	.35+	41	51.00	- .35	93	54.32	1.08
$3-3,999	31	54.71	-1.86+	19	52.47	1.86 +	50	53.59	.35
$4-4,999	21	55.86	.89+	19	48.11	- .89	40	51.99	-1.25+
$5-5,999	19	54.37	-4.89*+	10	58.20	4.89* +	29	56.28	3.04*
$6,000 and over	18	60.17	2.52+	6	49.17	-2.52 +	24	54.67	1.43+
Total	170	56.22	2.98*	157	50.25	-2.98*	327	53.24	

Note: (1) Asterisk (*) indicates significance at .05 level for D-score measures; plus sign (+) indicates significance at .05 level for α-score measure.

EXHIBIT IV-20 COMPARISON OF PPVT SCORES BY URBANIZATION AND RACE

	RACE								
	White			Other			Total		
Urbanization	N	Mean	Difference	N	Mean	Difference	N	Mean	Difference
Urban	96	54.45	-3.14	153	49.92	3.15	249	52.18	-1.38
Farm	21	63.38	6.03*(1)	6	40.50	-6.03* +	27	51.94	-1.62
Rural	72	59.10	-2.87	31	54.03	2.87	103	56.56	3.00
Total	189	58.97	5.41*	190	48.15	-5.41*	379	53.56	

Note: (1) Asterisk (*) indicates significance at .05 level for D-score measures; plus sign (+) indicates significance at .05 level for α-score measure.

EXHIBIT IV-21 COMPARISON OF PPVT SCORES BY URBANIZATION AND FAMILY INTACTNESS

INTACTNESS

Urbanization	Father and Mother			Mother Only			Father Only			Total		
	N	Mean	Difference	N	Mean	Difference	N	Mean	Difference	N	Mean	Difference
Urban	179	52.47	-0.09	56	48.77	-9.97*+(1)	5	56.80	10.05*+	240	52.68	-4.18
Farm	24	58.83	-3.66	1	89.00	20.33*+	2	40.00	-16.68*+	127	62.61	5.75*
Rural	81	58.91	3.73	12	51.00	-10.36*	7	56.00	6.63	100	55.30	-1.56
Total	284	56.74	-0.12	169	62.92	6.06*	14	50.93	- 5.93*	367	56.86	

Note: (1) Asterisk (*) indicates significance at .05 level for D-score measures; plus sign (+) indicates significance at .05 level for α-score measure.

EXHIBIT IV-22 COMPARISON OF PPVT SCORES BY URBANIZATION AND INCOME

URBANIZATION

Income	Urban			Farm			Rural			Total		
	N	Mean	Difference	N	Mean	Difference	N	Mean	Difference	N	Mean	Difference
Under $3,000	111	49.59	-2.59*(1)	23	59.91	3.69*+	54	57.13	-1.10*	188	55.54	0.64+
$3,000 and over	99	53.49	2.59*+	8	51.25	-3.69*+	39	58.05	1.10*	146	54.26	-0.64+
Total	210	51.54	-3.36*	31	55.58	0.68 +	93	57.59	2.69*+	334	54.90	

Note: (1) Asterisk (*) indicates significance of .05 level for D-score measures; plus sign (+) indicates significance at .05 level for α-score measure.

EXHIBIT IV-23 COMPARISON OF PPVT SCORES BY RACE AND DEGREE OF MOTHER'S EDUCATION

RACE

Mother's Education	White			Other			Total		
	N	Mean	Difference	N	Mean	Difference	N	Mean	Difference
0-6	24	60.00	3.69	14	45.57	-3.69	38	52.78	- .01
7-8	30	53.23	-2.74	32	51.66	2.74	62	52.44	- .35
9-11	59	56.19	- .50	112	50.13	.50	171	53.16	.37
High School Graduate									
Yes	56	59.68	1.53	38	49.55	-1.53	94	54.62	1.83
No	8	54.50	- .11	3	47.67	.11	11	51.08	-1.71
College									
Yes	3	54.33	-1.86	4	51.00	1.86	7	52.66	- .13
Total	180	56.32	3.53*(1)	203	49.26	-3.53*	383	52.79	

Note: (1) Asterisk (*) indicates $p < .05$.

EXHIBIT IV-24 COMPARISON OF PPVT SCORES BY RACE AND WHETHER MOTHER WORKS

Mother Works	RACE								
	White			Other			Total		
	N	Mean	Difference	N	Mean	Difference	N	Mean	Difference
Yes	39	57.56	-0.45	95	51.32	0.45	134	54.44	0.98
No	137	56.49	0.44	90	48.46	-0.45	227	52.48	-0.98
Total	176	57.03	3.57*(1)	185	49.89	-3.57*	361	53.46	

Note: (1) Asterisk (*) indicates p <.05.

EXHIBIT IV-25 COMPARISON OF PPVT SCORES BY FAMILY INTACTNESS AND SEX

	FAMILY INTACTNESS											
	Mother and Father			Mother			Father			Total		
Sex	N	Mean	Difference	N	Mean	Difference	N	Mean	Difference	N	Mean	Difference
Male	142	57.31	1.61	43	47.42	-3.41	8	56.50	1.79	193	53.74	1.08
Female	146	51.92	-1.62	33	52.06	3.39	8	50.75	-1.80	187	51.58	-1.08
Total	288	54.62	1.96	76	49.75	-2.91	16	53.63	0.97	380	52.66	

EXHIBIT IV-26 COMPARISON OF PPVT SCORES BY RACE AND SEX

	RACE								
	White			Other			Total		
Sex	N	Mean	Difference	N	Mean	Difference	N	Mean	Difference
Male	106	59.70	1.41	95	50.24	-1.40	201	54.97	1.68
Female	87	53.53	-1.40	112	49.69	1.41	199	51.61	-1.68
Total	293	56.62	3.33*(1)	207	49.97	-3.32*	400	53.29	

Note: (1) Asterisk (*) indicates $p < .05$.

EXHIBIT IV-27 COMPARISON OF PPVT SCORES BY URBANIZATION AND SEX

URBANIZATION

Sex	Urban			Farm			Rural			Total		
	N	Mean	Difference	N	Mean	Difference	N	Mean	Difference	N	Mean	Difference
Male	131	52.72	-2.24	14	64.64	3.01	51	59.98	- .76	196	59.11	3.34*(1)
Female	129	50.52	2.24	17	51.94	-3.01	55	54.82	.76	201	52.43	-3.34*
Total	260	51.62	-4.15	31	58.29	2.52	106	57.40	1.63	397	55.77	

Note: (1) Asterisk (*) indicates $p < .05$.

EXHIBIT IV-28 COMPARISON OF PPVT SCORES BY FAMILY INTACTNESS AND RACE

	FAMILY INTACTNESS											
	Mother and Father			Mother Only			Father Only			Total		
Race	N	Mean	Difference	N	Mean	Difference	N	Mean	Difference	N	Mean	Difference
White	152	57.86	.77	17	52.88	.41	6	54.83	-1.19	175	55.19	2.53
Other	126	51.25	- .77	53	47.00	- .41	7	52.14	1.19	186	50.13	-2.53
Total	278	54.56	1.90	70	49.94	-2.72	13	53.49	0.83	361	52.66	

to fill all cells. As shown in the exhibit, for posttest differences of means, there are significant column effects, two significant row effects (very low and moderately high income groups showed a significant interaction with the treatment), and four race-by-income interactions. For example, there are significant interactions for the cell named White $1-1999 and Other $1-1999. Similarly, for White $5,999 and Other $5,999 there are significant 2-factor interactions. The pluses indicate even more 2-factor interactions for the regressed difference measure.

Comparatively, the largest cell effects occurred for the $5-5999 groups. Since the variances within columns are equal, the LSE's can be used as measures of relative magnitude of effects. It is difficult, however, to see any consistent pattern or interpretation. There is some rationale about why the very low and quite high income groups should be significantly low and high on the posttest when the effects of race are removed. At least, it tends to confirm our suspicion that performance may indeed be related to level of income. However, no attempt will be made to try to interpret the other effects; indeed, with significant two way interactions occurring throughout the arrays, it appears that we may be seeing the effects of some factor correlated with this particular sample of race by income-equated subjects.

Similarly, the analysis of regressed differences does not clarify matters.[1] In this case, it eliminates the column effect but adds another row interaction. It also adds a number of additional cell interactions.

In other exhibits a similar situation arises. Perhaps the most useful information is the identification of those combinations of factors for which no significant cell interactions occurred. These are:

Mother's Education x Race	(Column effect only)
Mother Works x Race	(Column effect only)
Sex x Family Intactness	(No main or cell effects)
Sex x Race	(Column effects only)
Sex x Urbanization	(Row effects only)
Race x Family Intactness	(No main or cell effects)

---

[1] LSE's for regressed difference components are not given in the exhibits.

In particular, Sex x Family Intactness is of interest (see Exhibit IV-25) because of the reversal of male and female means in the "Mother Only" group. The effect, while not significant, seems to be strong enough to eliminate the significance of the difference between the sexes seen in the 1-factor tables. Similarly, Negro males and females appear not to have scored very differently on the PPVT posttests.

In general, it is worthwhile to move back and forth between the 1- and 2-factor tables if one is going to do data snooping. We shall not attempt further interpretation here. It seems sufficient to note that: (1) the effect of race is shown in all cases in which race is one of the factors; (2) the effect of sex seems to interact with other variables; and (3) most of the combinations of factors shown here indicate no differential sensitivity of impact as measured by the PPVT to the more removed variables such as mother's education or whether mother works.

The results of the two types of analyses of change given for the 1-factor classifications are of interest on several grounds, especially in light of the results with the age and income (2-level) factors. First, it was noted that, except for those factors, there were no differences in the results obtained with the two different measures of effect. All gains were positive and generally of the same magnitude (not significantly different). One reason for this may be that most of the groups (factors and levels) were not extremely different in terms of pretest standing. Thus, because we are dealing with a restricted range of scores, there is no reason to expect a marked regression effect over and above the absolute gain scores. This is particularly so since the groups were not selected for analysis on the basis of their pretest standing in the first place, although performance level raw score measures would be expected to correlate with age.

On the other hand, the correlation between pretest and posttest scores was not perfect; thus, there is no reason not to expect some regression effect.

Throughout the analyses of impact as measured by performance on the PPVT, there has been a general uniformity of results: regardless of independent variables (factors such as age, sex, race, etc.), the mean performance of groups has shown a consistent increment of the same relative magnitude. Except for age and income variables, there has been no indication of any differential sensitivity of subjects to the program as far as the difference and regression models are concerned. Granting that the data from the 1-percent sample are related to a design in which a number of factors can operate to jeopardize internal validity (Reference 15) and granting the problem of establishing or defining the validity of a summary test score such as that provided by the PPVT, the results both in the national sample and in a number of independent studies seem suspiciously uniform. However, the age finding suggests the hypothesis that, at least in the national sample, there was some sensitivity of performance to program, as measured by the PPVT. There are, of course, many alternative hypotheses. However, assuming for the moment that the result is indicative of a differential effect of the program with respect to age of the children, there are some extremely provocative further hypotheses of an explanatory nature that could well be the subject of future investigation. For example, it was found in an examination of characteristics of workers that a sizable percentage of workers had had little or no previous experience with preschool children. On the other hand, a large number of the professional workers had had elementary school experience. It is possible to entertain the hypothesis that the more removed (dissimilar) the child is from the teacher's experience, the less effective he or she will be in guiding psychological (especially cognitive) development or shaping language skills in a given period of time. Stated otherwise, the greater the disparity between the level of development of the child and the average level experienced by the teacher, the greater the incompatibility of teacher's skills and child's abilities.

By this reasoning, we are inclined to accept the results based on the assumptions of the regression model. In the regression model, it is expected that the lower scorers will gain more than the higher ones. Generally they did, and we are thus inclined to conclude that there was no differential effect. When we did not find the expected regression, as in the age factor group, we were quite prepared to believe in a lack of effect, even though there was no preselection of extreme groups. However, the younger children did show a gain (D-scores) that was not significantly different from that shown by the older children. We could just as well argue that for them to have made such a gain indicates a far greater impact on a group that, by the nature of the PPVT test, should be less developed and able to cope with the requirements of the operation in the first place. Equal score intervals may not signify equal ability increments. By this argument, we may well conclude that the treatment had a more significant impact on all the lower scoring groups (e.g., Negroes, girls, etc.).

This issue is not resolvable on a priori grounds. The conclusion drawn here is that the two analyses, based on quite different expectations, lead to quite different conclusions. In the absence of sound theory to guide a choice, the conclusions are valuable primarily to the extent that they suggest interesting hypotheses for further study.

b. Independent Research Studies

Reports have been received to date from 20 different investigators who turned their attention to studying changes in children's general cognitive functioning or development. The test of cognitive functioning most frequently used was the Peabody Picture Vocabulary Test (PPVT). The PPVT studies constitute replicative studies to some extent, since PPVT score changes were also obtained in the nationwide 1-percent sample. In addition to the PPVT, the Preschool Inventory and other tests of cognitive or general functioning such as school readiness tests, the Stanford-Binet, Goodenough Draw-A-Person, Primary Mental Abilities, Seguin Form Board, and the Leiter International were used by different researchers.

Ideally, all investigations of Head Start impact would have included measures of Head Start children early in the program (pretests) and late in the program (posttests), as well as measures of disadvantaged and nondisadvantaged non-Head Start (control) children for comparison purposes. Unfortunately, it was often impossible for researchers to include all the desirable groups.

This part of the report is organized in several subsections. First, appropriate independent research studies which included the PPVT as one of their tests will be described. (Of course, some of these studies also used other tests in addition to the PPVT.) Next, studies which did not report PPVT scores, but used other tests of cognitive functioning (such as the Primary Mental Abilities test), will be described. Within these two subsections, then, will be found a description and discussion of all available independent research studies which reported data, either of a preliminary or a final nature, on the impact of Head Start in the areas of cognitive or general functioning.

The third subsection will include a discussion of the relationships between various test measures and the problems of interstudy comparisons. Finally, a summary of independent research studies in the cognitive area will be presented.

(1) Studies Including Use of PPVT

A number of researchers included the PPVT among their research instruments. These studies are of special interest, since data on the 1-percent nationwide sample are also available (see subsection IV. C. 2).

A report from the Warminster Township School District in Pennsylvania (Reference 52), reported pre-and post-Head Start PPVT scores for 15 pre-kindergarten and 13 pre-first grade children. For the younger group, the pre-Head Start mean PPVT IQ of 74.0 shifted to 82.9 after Head Start. For the older group, the preprogram mean PPVT IQ obtained was 85.7, and rose to a mean of 97.2 on the posttest.

Dr. Stanley I. Berger of the University of Rhode Island (Reference 5) obtained pre-Head Start PPVT scores for 59 children, as well as pre-Head Start scores for three other tests: the Stanford-Binet, the Leiter International, and the Raven Progressive Matrices. From the 59 children, a random sample of 20 children were posttested on all measures. Berger converted the raw scores to IQ points and reported that the pretest means obtained on the Stanford-Binet, Leiter International and PPVT were respectively 92, 84, and 83. The actual pretest and posttest scores for the 20[1] children were not presented in the report, but the mean gains were given as +3.4 for the Stanford-Binet, +9.75 for the PPVT, and +10.55 for the Leiter International. The Raven Progressive Matrices scores, which were not given as IQ scores, were 4.09 for the pretest, with a -0.35 change on the posttest. This represented a significant improvement, in that it took the children less time to complete the test tasks on the posttest. All gains were statistically significant, but the +3.4 gain on the Stanford-Binet was within the standard error of measurement. The Leiter International and the PPVT reflected the most gain from the beginning to the end of this Head Start program.

Dr. Leon Eisenberg of Johns Hopkins University (Reference 33), used the PPVT, as well as several other measures, in his major study and several substudies. Because of the limited standardization of the PPVT, Eisenberg chose to report his findings for the most part in raw score terms as well as IQ points. In a sample of 424 Head Start children, there was an average (mean) PPVT score change from 32.6 to 39.7 (raw score) from the beginning of Head Start to the beginning of school in September. The PPVT manual (Reference 30, Page 15) indicates that for children ages 4 years, 9 months, to 5 years, 5 months, this score change represents an estimated IQ score change of 13 points (from 68 to 81).

In addition to determining gross mean score changes, Eisenberg analyzed score changes of Head Start children in relation to their initial test scores. Exhibit IV-29 summarizes this analysis.

Exhibit IV-29 shows that the greatest gains occurred for children with the lowest initial (pretest) score, as might be expected. However, there was a trend toward higher postscores in all quartiles; in fact, 70 of the 95 children in the highest quartile either maintained or improved their score from pretest to posttest.

In order to supplement Dunn's (Reference 30) standardization data on the PPVT, Eisenberg also assembled his research data to show mean

---

[1] An assumption apparently was made that the 20 children randomly selected from the total group of 59 children were representative of the entire group, and that the prescores for the entire group reflect the prescores for the smaller group.

EXHIBIT IV-29 PPVT CHANGE IN RELATION TO INITIAL SCORE (EISENBERG)

Quartile for Initial PPVT Score	N	Mean Gain, Posttest	Number Children With Score Decrease
1 (lowest)	96	13.55	7
2	96	10.05	12
3	98	5.16	19
4 (highest)	95	.85	25

raw scores for month-by-month chronological age intervals[1] between 54 and 69 months (i.e., between 4 years, 6 months, and 5 years, 9 months). The data presented in Exhibit IV-30 report initial ("naive") test results for 712 culturally disadvantaged children (both Head Start and non-Head Start) and present some contrast to the original PPVT standardization group of white, Nashville, Tennessee, children. Eisenberg compared the mean raw score of 30.93 obtained by the 482 children between 57 and 65 months of age (i.e., 4 years, 9 months, to 5 years, 5 months) in his sample with the mean raw score of 50.22 reported in the PPVT manual[2] for the children in that age group in the standardization sample; the 20-point differential was a striking indication to Eisenberg that the standardization sample, used as a comparison group, was considerably more verbally developed, and that his own sample was indeed disadvantaged.

In addition to the rather extensive PPVT data on Head Start and non-Head Start children that Eisenberg obtained and reported, he also obtained Draw-A-Person (DAP) tests on the same children (both Head Start and non-Head Start). For both tests, there were three test periods for Head Start children: early in the Head Start program (pre-Head Start); late in the program (post-Head Start); and at the beginning of school in September 1965. All non-Head Start children were tested only once, at the beginning of school in September.

Exhibit IV-31 summarizes Eisenberg's PPVT and DAP test data for his pre-Head Start children (HS_1), post-Head Start children (HS_2), September Head Start children (HS_3), and September control, or non-Head Start, children (C). The exhibit indicates that the Head Start children's September scores were significantly higher than the scores of the control group. However, a comparison of the pre-Head Start June scores and non-Head Start (C) September scores yielded no significant differences, indicating that the Head Start children showed about the same verbal development at a younger age (in June) as the control

---

[1] PPVT standardization data for young children were grouped by 6-month intervals rather than 1-month intervals.

[2] Reference 30, page 28.

EXHIBIT IV-30 DISTRIBUTION OF PPVT RAW SCORES BY CHRONOLOGICAL AGE (EISENBERG)(1)

Months	N	Mean	Sigma
54	21	28.67	11.57
55	31	30.61	12.70
56	29	31.41	11.11
57	42	29.60	11.74
58	59	29.02	13.06
59	59	27.44	12.42
60	46	29.13	17.58
61	77	28.73	17.42
62	46	32.41	11.41
63	48	37.67	10.46
64	47	32.45	11.16
65	58	33.76	11.51
66	61	34.51	15.20
67	33	29.52	18.73
68	36	36.00	11.94
69	19	36.95	13.61

Note: (1) The sample consisted of 712 culturally disadvantaged children, as defined by their eligibility for Head Start. Thus, the sample included Head Start children as well as non-Head Start, but comparable, children.

EXHIBIT IV-31 SUMMARY OF PPVT AND DAP SCORES (EISENBERG)

	Draw-A-Person				PPVT			
Group	N	Mean Raw Score	Standard Deviation	IQ Estimate	N	Mean Raw Score	Standard Deviation	IQ Estimate
HS_1 (pre-Head Start)	500	7.71	4.79	76	424	32.63	12.33	68
HS_2 (post-Head Start	476	9.10	4.20		423	36.83	10.82	76
HS_3 (Head Start, September)	435	9.75	4.41	82	413	39.74	11.34	81
C (non-Head Start, September)	420	8.91	4.98		402	33.65	11.70	70

Significant Changes	
DAP	PPVT
HS_1 - HS_2	HS_1 - HS_2
HS_2 - HS_3	HS_2 - HS_3
HS_3 - C	HS_3 - C
	HS_2 - C

children at an older age (in September, about 2 months later). Thus. Eisenberg speculated that possibly the Head Start children had higher verbal abilities to begin with than the non-Head Start children.

Eisenberg also directed two substudies that pertained especially to cognitive development, with specific reference to the effects of special tutoring on cognitive functioning as measured by selected instruments. In one substudy, "Clinical Testing of Head Start Children," Eisenberg's control group consisted of 20 children who were comparable to the experimental group of 34 Head Start children, in that their parents had also applied for Head Start. (Application had been denied because of lack of available space.) One group of the Head Start children received, in addition to the regular Head Start experience, special tutoring in drawing people and in playing games designed to teach awareness of body parts. Thus, there were three groups in the study: (1) a regular Head Start group, (2) a Head Start group which received special tutoring designed to foster awareness of the body, and (3) a control group drawn from the same population as both Head Start groups.

The three tests of cognitive development were the revised Stanford-Binet Intelligence Scale, the Goodenough Draw-A-Person, and the PPVT. (A behavior profile was also used; see subsection IV. C. 3.). On the pretest, the 34 Head Start and 20 control children were comparable on the Stanford-Binet, with mean (average) IQ scores of 84.17 for the Head Start group and 83.17 for the control group. The posttests indicated a +6 change in IQ points for the Head Start group (mean IQ = 90.17) and only a +1 change for the control group (mean IQ = 84.64). The difference between the Head Start and control groups' mean IQ scores on the posttest was statistically significant at the .05 level. Neither the DAP nor the PPVT scores for this substudy were available at the time of this writing, but Eisenberg indicated that the drawings of the tutored Head Start group showed significant improvement as compared with those of the Head Start children who received no special tutoring in body awareness. This finding is especially interesting because the pre-DAP results were considered unscorable for both groups of Head Start children. (No information was reported on the DAP for the control children.)

The second of Eisenberg's substudies which included use of the PPVT was called "The Effect of Special Perceptual Training on the PPVT, the California Mental Maturity Scale, and the Johns Hopkins Perceptual Task." (The Johns Hopkins Perceptual Task, or JHPT, was especially designed to assess cognitive skills in language-deficient children.) For this substudy there were three groups of children, all matched for age and sex: (1) 42 Head Start children who received special training in perceptual and conceptual skills, (2) 42 Head Start children who received no special training in addition to their Head Start experience, and (3) 42 non-Head Start children who were matched by age and sex with the two Head Start groups.

This study did not involve pretests; all measures were made in September at the beginning of school. Exhibit IV-32 summarizes the available results of the substudy.

Eisenberg noted that for the CMMS (California Mental Maturity Scale) there was a general trend in favor of both Head Start groups as compared with the non-Head Start group, although statistical significance was obtained only for the Head Start Special Training group as compared with the non-Head Start group.

In general, the results of Eisenberg's major study and substudies, all involving use of the PPVT as one measure of cognitive functioning and all involving comparison groups of some kinds, indicate that Head Start children showed substantial improvement in areas of cognitive functioning and development.

A locally funded independent study submitted by Mrs. Dorothy Zimmerman, Caswell County, Yanceyville, North Carolina (Reference 112), also studied Head Start impact in the cognitive area via PPVT pre- and posttesting of 38 Head Start children. The score changes were reported in terms of the number of children who lost and gained points or who had no score changes. Of the 38 children, 2 lost PPVT raw score points from pre- to posttest, 11 registered no change, and 25 gained points. Of the 25 "gainers," 4 gained less than one-half of a standard deviation, 5 gained one-half to one standard deviation, and 16 gained at least one full standard deviation.

EXHIBIT IV-32 EFFECTS OF SPECIAL TRAINING IN PERCEPTUAL AND CONCEPTUAL SKILLS (EISENBERG)

Group	N	Age in Months	PPVT Raw Score	CMMS Raw Score	JHPT Raw Score
1. Head Start (special training)	42	63.00	37.73	39.50(1)	19.92
2. Head Start (regular)	15	62.21		37.29	21.57
3. Non-Head Start	42	63.17	34.12	30.69(1)	18.69

Note: (1) For the CMMS, the Head Start special training group received a significantly higher score (1-percent level of confidence) than the non-Head Start Group.

In another study, Holmes and Holmes (Reference 58) used the PPVT, the Seguin Form Board, and four Stanford-Binet subtests to measure changes in cognitive functioning during Head Start. They utilized a control group for comparison purposes and were able to obtain test scores on children some 2 months after school had been in progress, as well as in August (a time corresponding to the end of the Head Start program). Unfortunately, pre-Head Start scores were not obtained.

The Holmes' study was especially interesting because of the care taken to assure comparability of the control (non-Head Start) and experimental (Head Start) groups. It had been hoped that the control population would be drawn from a Head Start waiting list, but when this plan became impossible (because the waiting list was not long enough) control children were recruited and selected for comparability along the following lines: lack of previous school experience, mean age of 5 years and 5 months, sex, ethnicity, parents' occupation, parents' education, presence of mother, and presence of father. The only measure on which the two groups were not comparable was number of siblings; the Head Start children had more siblings in the home than the control group. The final number of children on whom two test scores were obtained was 29 for each group. Exhibit IV-33 summarizes the results of the testings.

These data bear careful consideration because they imply that, in general, for the program under investigation the 8-week summer Head Start program had an impact comparable to approximately the first 8 weeks of regular school, and that on one measure, at least, the Head Start group was maintaining the advantage.

Another thought-provoking study was directed by Porter in Cambridge, Massachusetts (Reference 87). An unusual factor in this study was that all testing was "blind," that is, the testers did not know which children had participated in Head Start and which had not. Unfortunately, pretesting was not done; all tests were given at a time following the Head Start program, but before school opened. However, the 33 control group children were carefully matched with 33 Head Start children for: lack of previous school experience, race, sex, age,

EXHIBIT IV-33 COGNITIVE STUDY RESULTS (HOLMES AND HOLMES)

Test	Score Description	Head Start			Non-Head Start		
			August	November		August	November
Stanford-Binet	Raw score for selected subtests	N	29	29	N	29	29
		Mean	20.41	31.34	Mean	13.03	27.21
		Standard Deviation	10.28	9.21	Standard Deviation	8.03	6.20
PPVT	Raw score converted to IQ score	N	29	29	N	29	29
		Mean	90.10	93.70	Mean	74.03	91.17
		Standard Deviation	20.10	17.00	Standard Deviation	15.86	14.48
Seguin Form Board	Number of seconds for task completion	N	27	27	N	27	27
		Mean	53.70	37.44	Mean	71.30	53.30
		Standard Deviation	26.52	23.14	Standard Deviation	27.86	31.13

education and age of mother, size and intactness of family, income, housing, and the fact that the children remained in Cambridge during the summer. The children were transported to Cambridge City Hospital for psychometric evaluations (PPVT, Form B, Draw-A-Person, Seguin, Geometric Designs, and language samples); in addition, the non-Head Start children received physical and audiovisual examinations. (The Head Start children had been examined earlier, during their program.) The scores obtained on the PPVT for Head Start and non-Head Start children revealed no significant differences between the two groups. Neither the Goodenough Draw-A-Person test results nor the geometric figures tasks showed any meaningful distinctions between the two groups. However, on the Seguin Form Board task, Head Start children did tend to solve the problem more rapidly, both on the initial trials and on subsequent trials, than the control children.

Thus, while other independent studies have reported that, following Head Start, participant children did significantly better than their non-Head Start peers (i.e., children from comparable environments) on tests of cognitive development, Porter's study, in which testing was "blind," revealed no significant differences, although the results of the Seguin Form Board (a measure of learning rate), were fairly consistently predictive of Head Start/non-Head Start differences.

While the number of children involved in the study was small, and there were no pretest scores for comparison, the results of the study suggest that the main factor distinguishing this study from other reported studies--the factor of blind testing--may be of great importance in obtaining a valid picture of program effects. There is a need for further studies in which the testing is not done by an involved teacher but by someone more impartial--someone who is unaware of or uninvolved in the child's preschool status.

It is worth noting in passing, however, that the use of an ex post facto analysis, with a quasi pretreatment equivalence of experimental and control groups established by matching on variables other than the performance ones, can produce results that may be misleading (cf. Reference 15).

Johnson (Reference 64) of the Clavis Montessori Schools reports several findings of interest with respect to impact of Head Start in cognitive areas. On the pre-Head Start PPVT test, the mean IQ for the 79 Head Start children was 72, and the mean IQ when measured by the Goodenough Draw-A-Person (DAP) test was 92. Posttesting results showed an increase in the PPVT to 79 and in the DAP IQ to 111.

The Johnson study also included other measures related to cognitive areas. Using the Wide Range Achievement tests, Johnson reported statistically significant gains occurring on the oral arithmetic readiness test; the results showed an increase in grade-placement units of 3 months for the 6-week instructional period. (It should be mentioned, however, that the Head Start children were still about 6 months behind their chronological-age peers, as defined by the tests' standardization sample). On the reading test an increase of 2 months was measured, but this increase was reported as not statistically significant.

The Gesell Maturation Index was one test used to measure perceptual motor development; there was evidence of development in this area, although the improvement was not statistically significant. Two other objective tests of perceptual motor development, the Mateer Inversion Test and a test of eye-hand coordination and dominance, indicated that even after Head Start, the children would need a great deal of readiness experience before formal reading experience could be initiated.

In addition to the objective tests, teacher rating scales of growth in the "intellectual-academic" areas reflected the opinion that considerable development had taken place--an opinion that appeared to be supported by the test results.

In Johnson's study, all test results were analyzed for the Head Start group as a whole (discussed above), and for Anglo-American (N = 17) and Mexican-American (N = 62) children separately, to determine differences between the two groups of children as well as progress or development of the total group. One of the most striking differences, which illustrated the linguistic handicap of the preschool Mexican-American child, occurred on the PPVT pretests. The pre-PPVT IQ means were 91 and 55 for the Anglo-American and Mexican-American children, respectively, while the nonverbal DAP pretest IQ mean for the Mexican-American children was 91--almost the same as the DAP mean of 92 obtained by the Anglo-American children. Both groups showed mean score increases on the PPVT and DAP posttests; the increases were statistically significant for the DAP only.

On the reading and arithmetic readiness pretests, the Anglo-American children obtained significantly higher mean scores; both groups made positive but not significant mean gains from the pretest to posttest period. The Anglo-American group scored at grade level on the posttests, in contrast to the Mexican-American children, whose mean scores were at the prereadiness levels.

On measures of perceptual-motor development, both groups made progress during Head Start, but the gains made by the Mexican-American children were often significantly greater than those of the Anglo-American children.

On the teachers' rating scales, both groups showed development, but the Mexican-American children were seen as having made more gains than the Anglo-American children in their attitudes toward school, adjustment in group situations, and interest in the school program.

In general, then, there is evidence in Johnson's study to support the findings of others (Eisenberg (Reference 33); Jacobs and Shafer (Reference 62); Knox County (Reference 4)) that in Head Start, the lower the initial performance of children, the greater the measured improvement.

Another investigator who included the PPVT among his test instruments was a pediatric neurologist, Dr. Mark N. Ozer (Reference 82). Ozer used the PPVT as a subtest for a School Readiness Evaluation and found an increased mean raw score of from 35.85 (pre-Head Start) to 41.64 (post-Head Start)--a gain which was statistically significant.

Ozer's study, "The Effects of Neurological and Environmental Factors on the Language Development of Head Start Children," was especially interesting because it related type of center (e.g., teachers and facilities) to gains as measured by the School Readiness Evaluation Battery (SRE). There were 65 children (with a mean Stanford-Binet IQ of 88.78) in the total group for whom complete test data were obtained;

all children participated in a Head Start program, but one subgroup of Head Start children met in a felicitous setting (the National Child Research Center) with teachers highly skilled in early childhood development, while the other subgroup met in a somewhat dilapidated public school building and was taught by dedicated but nonspecialized teachers.

The SRE, which consists of six subtests yielding 14 discrete measures, was used to measure pre- and post-Head Start change. For the total group of 65 children, the SRE reflected significant score gains in 6 of the 14 areas of measurement: repeating words, repeating sentences, comprehending terms (the PPVT), retelling a story via pictures, recognizing letters of the alphabet, and recognizing Arabic numerals. There was a significant score loss in only one area, "conversation in response to question."

There were no significant differences between the two centers, although they presumably reflected considerable differences in certain program characteristics. Ozer further examined the score changes in relation to sex and age. Although there appeared to be some age-specific improvement in a few SRE areas on the posttest (i.e., older children showed significantly more improvement than younger children on four subtests), there was considerable evidence that the younger children also gained generally during Head Start. Thus, significant improvements occurred on six SRE subtests. These improvements were apparently not related to factors of school program, sex, or age, and thus may reflect a uniform effect of Head Start experience.[1]

Another study, by Horowitz and Rosenfeld (Reference 59) of the University of Kansas, used both the PPVT and the Preschool Inventory

---

[1] It will be recalled that for the 1-percent sample, analyses of PPVT score gains by age revealed no statistically significant age-specific improvements--a finding in accord with Ozer's findings. However, analysis of covariance resulted in the finding that improvement was significantly less for younger children (see the discussion on page IV-47).

(PSI) to assess the impact of Head Start. The study is of special interest because it obtained data on two standard Head Start instruments (PPVT and PSI), and because both the experimental and control groups (the regular Kansas University summer nursery school class) were pre- and posttested on the PPVT.

On the PPVT, the mean raw score for the 16 control children remained about the same from pre- to posttest (50.6, pretest, and 50.2, posttest), but the mean raw score for the 23 Head Start children jumped from 39.6 to 44.6, significant at about the .06 level. Considering that the Head Start children were a good deal older than the control children (the mean age of Head Start children was 5 years, 2 months, with a range of 4 years, 5 months, to 5 years, 11 months; while the mean age of the control children was 4 years, 2 months, with a range of 3 years, 7 months, to 4 years, 8 months), it is apparent that the Head Start experience did not permit the experimental children to catch up with the controls in such a short time; however, some gain was noted for the Head Start children over the 8-week period, as reflected by the PPVT score changes. As a matter of fact, when the PPVT standardization sample is referred to, it can be seen that while the scores of the control group reflected no change during their nursery school experience and the children maintained their mean mental age of approximately 5 years, 1 month (which was nearly 1 full year more than their mean chronological age), the Head Start groups went from a mean mental age of about 3 years, 10 months, to about 4 years, 4 months, as reflected by the PPVT--a gain of about 6 "mental age months" for the 2 actual months that passed (i.e., the approximately 2 months between pre- and posttesting). Although their mean mental age of about 4 years, 4 months, at the end of Head Start was still about a year less than their mean chronological age, their PPVT gains can be considered fairly substantial.

Although the original unrevised PSI was administered to each child, the results reported were based on 80 items which appear in a shorter form as revised by Caldwell.[1] The 80 items were grouped into six content areas: Basic Information and Vocabulary (12 items); Number Concepts and Ordination (21 items); Concepts I--size, shape, motion, and color (17 items); Concepts II--time, object, class, and social (14 items); Visual Motor (4 items); and Following Instructions (12 items).

Head Start children were pretested during the third and fourth weeks of the program and posttested during the eighth (final) week. The control children were tested only once on the PSI, at the same time the Head Start children were pretested.

The tests were scored by tabulating the number of scored points for each child in each of the six content areas. Exhibit IV-34 summarizes the results.

Tests of significance for the means in Exhibit IV-34 indicated that in all six content areas, the nondisadvantaged (control) children were significantly superior to the Head Start children at the time of the first testing. When the scores of the control children were compared with the posttest Head Start scores, the control children were significantly superior in only three content areas: Concepts I, Visual Motor, and Following Instructions. The two groups performed comparably on Basic Information and Vocabulary, Number Concepts and Ordination, and Concepts II. Significance tests between the pre- and post-Head Start means indicated no statistically significant changes in any of the six content areas, although there was improvement in all areas except "Following Instructions."

At the University of Texas, Pierce-Jones (Reference 86) directed several Head Start investigations, one of which studied "Cognitive Functioning of Preschool Children in Relation to Duration of Head Start Experience." Using 126 Head Start children, he obtained pretest raw scores on the Seguin Form Board (SFB), as well as the PPVT and the

---

[1] Inconsistent scoring methods of the PSI among different investigators make meaningful comparisons between PSI results obtained in various independent studies virtually impossible.

EXHIBIT IV-34 PRESCHOOL INVENTORY RESULTS (HOROWITZ AND ROSENFELD)

Content Area	Control (N = 20)		Pre-Head Start (N = 22)		Post-Head Start (N = 22)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Basic Information and Vocabulary	19.6	4.0	17.1	4.4	17.7	5.7
Number Concepts and Ordination	13.4	5.7	10.7	4.4	11.0	4.6
Concepts I	17.9	3.8	12.3	5.2	12.9	5.9
Concepts II	17.3	6.1	12.5	5.3	14.5	5.0
Visual Motor	11.9	6.2	7.4	4.6	7.7	6.1
Following Instructions	18.2	4.4	15.1	3.7	14.9	5.2

PSI. He then varied the number of days before administering the posttests, so that some posttests were given after only 10 days in Head Start, while other posttests were given as many as 29 days following Head Start experience. The mean pre- and posttest gains for the total sample of 126 children, without regard to the time interval between tests, were significant beyond the .001 level of confidence for the PPVT and the Preschool Inventory; for the Seguin Form Board there was not a significant change for the total group. Exhibit IV-35 summarizes the PPVT, PSI, and SFB pre- and post-Head Start test results. (It should be noted that a shortened version of the PSI was used, which contained only 69 items rather than 161.)

For the specific time periods between pretest and posttest (10 to 13 days, 14 to 18 days, 19 to 22 days, and 23 to 29 days) the pre- and posttest score change was significantly higher in two cases for the PPVT (14 to 18 days and 23 to 29 days), in three cases for the Preschool Inventory (10 to 13 days, 14 to 18 days, and 23 to 29 days), and in one case for the Seguin Form Board (19 to 22 days).

In addition to test measures of cognitive development, Pierce-Jones also included a rating scale measure of school adjustment. After 4 months of school (in December, 1965), 100 first-grade teachers (50 percent of whom had taught in the summer program) from five Texas school systems were asked to compare Head Start and non-Head Start first-grade pupils. The results showed that teachers mentioned Head Start children more often as "proficient learners" and "intellectually curious." And, whether or not the teachers had been involved in Head Start, they all tended to believe that Head Start children were generally superior to non-Head Start children.

A report of PPVT scores obtained in October 1965 on 37 children who had participated in Head Start was received from Mr. Robert Fishman (Reference 34) of Project HOPE (Kentucky). Although pre-Head Start scores were not available, these scores are of interest because they illustrate the wide range of scores obtained on the PPVT. The contrast between a group post-Head Start raw score mean of 34.70

EXHIBIT IV-35 PPVT AND PSI TEST RESULTS (PIERCE-JONES)

		Mean Scores								
		PPVT			PSI			SFB(1)		
Subjects/ Time Intervals	N	Pretest	Posttest	p	Pretest	Posttest	p	Pretest	Posttest	p
All Subjects	126	45.93	47.85	*(2)	43.79	45.56	*	28.56	28.15	
10-13 days	35	47.94	49.51		46.40	48.49	*	28.71	26.83	
14-18 days	34	44.74	47.94	*	42.03	44.24	*	25.59	31.06	
19-22 days	31	48.52	48.06		44.00	44.16		32.77	26.00	*
23-29 days	26	41.69	45.23	*	42.31	45.04	*	27.23	28.69	

Notes: (1) The SFB scores, which are intended to measure learning rate, are reported in terms of seconds required for task completion; thus a decreased score reflects improvement, in that the task was completed more quickly.

(2) Asterisk (*) indicates statistically significant difference, beyond .05 level of confidence.

(presented here) and 52.9 (from the 1-percent sample), for children of quite similar ages, is noteworthy. The group studied consisted of 37 children with a mean chronological age of 5 years, 2 months. Their raw score mean of 34.70 was converted to the equivalent mean mental age of 3 years, 7 months, or IQ = 69.51.

Further discussion of the meaning and use of the PPVT results appears in subsection IV.C.2.b.(3) below.

(2) Studies Using Measures Other Than PPVT

In Tompkins County in upstate New York, Harding (Reference 47) obtained pre- and post-Head Start Draw-A-Person and PSI scores for 68 Head Start children.[1] Both DAP mean raw scores were 3.8, thus indicating that the DAP test did not reflect changes in cognitive functioning. (A raw score of 3.8 represents a mental age of about 4 years.) However, Harding reported significant mean gain scores on the Preschool Inventory total score (excluding the DAP which was used as a subtest) in each of five classes studied. For the 68 Head Start children in five classes the pretest Preschool Inventory mean score was 196, and the posttest score was 209, with a mean gain of about 13 points. Harding mentioned that the gains, as measured by the Preschool Inventory, were fairly evenly distributed between classes, although the teaching styles of the five teachers varied widely; thus, "at present it seems that there were few if any significant differences in effectiveness among the...programs," despite the considerable differences in the size of the staff, approaches of the teachers, and methods used. This finding of Harding's was consistent with Ozer's finding that two groups of Head Start children made comparable gains (on the School Readiness Evaluation Battery), even though the two programs reflected rather large differences in program quality in terms of staff and facilities.

Allerhand (Reference 2) not only measured PSI changes made by Head Start children during the program, but he also studied and compared concept development of 76 Head Start "graduates" and 126 non-Head Start children, all of whom had been attending kindergarten in the same classrooms for about 2 months. As a means of establishing comparability of the two groups, Allerhand administered the Preschool Inventory to all children, and found no significant difference between the preprogram Head Start mean of 151.33 (SD = 35.79) and the non-Head Start mean of 150.42 (SD = 34.36). (These reported Head Start scores were obtained during the first 2 weeks of the summer program, but the time period during which the non-Head Start scores were obtained was not actually reported. It is assumed in this report that their PSI scores were obtained at the same time).

---

[1] The DAP scores were obtained by separate scorings of Item 3 on the unrevised PSI. For Item 3, the tester said: "Draw me a picture of a man, a whole man, not just part of a man."

On all six concept measurements (color, form-space, grouping, ordering, time sequence, and time duration), the Head Start group did better than the non-Head Start group, and their advantage was statistically significant in the four concepts pertaining to grouping, ordering, time sequence, and color.

In addition to the concept measurements, Allerhand also reported data on the post-Head Start PSI results for the 76 participants. He found that the mean gain of 17 points (median and mode gains of 13 and 11, respectively) from the pretest mean of 151 was statistically significant beyond the .001 level of confidence.

Allerhand plans follow-up studies of the two groups. To the extent that the non-Head Start children were actually comparable to the Head Start children early in the summer, before Head Start, his future results should yield meaningful comparisons of the school progress of the Head Start children in relation to the progress of their cultural peers.

Eisenberg (Reference 33), whose PPVT studies were discussed earlier, also did a substudy concerning concept development, "The Effect of Tutoring on Perceptual and Conceptual Skills." The three groups, each of which contained 42 children, were all matched for age and sex and represented (1) Head Start children who received special training in perceptual and conceptual development, (2) Head Start children who received no special training in addition to the regular Head Start program, and (3) non-Head Start children.

At the end of the Head Start program, the children were tested individually for (1) ability to find similar stimuli among differing geometric forms; (2) ability to select objects according to labels of color, size, and shape; (3) ability to name color, size, and shape; and (4) ability to abstract color, size, and shape (a conceptual task). Results to date (for all except 27 of the regular Head Start children) indicate significant advantages for the Head Start special tutoring group in comparison with the regular Head

Start and non-Head Start groups in two perceptual areas--selection and naming of objects. However, when the two Head Start groups were pooled and treated as one group, there were no significant differences in the perceptual areas between the Head Start and control groups. In the conceptual area, however, there were no significant intergroup differences on the rate of solution of the concept tasks. Eisenberg's tentative conclusion was that neither the Head Start program nor special tutoring significantly facilitated concept formation, as reflected by the measures used. Thus, the results obtained by Allerhand and Eisenberg do not appear to be fully consistent in regard to the impact of Head Start on concept formation, although use of different tests is a confounding factor.

Chesteen (Reference 18) of Louisiana State University used the Science Research Associates Primary Mental Abilities (PMA) test to assess development in the area of cognitive functioning. Three groups of children were tested and studied:

- 86 Head Start children were given pre- and posttests. Of these 86, 81 were retested a third and fourth time, in September (early in the fall school term) and 4 months later. Their mean IQ scores for the four test periods were as follows: 86.35, 90.99, 93.32, and 99.11.
- 28 middle-class non-Head Start control children who were not assigned to the same classes as the Head Start children, but who were similar in age and general geographic locality, were tested twice, first in September, and again 4 months later. Their mean IQ scores were 105.68 and 112.36 for the two test periods.
- 126 non-Head Start children who were in the same school classes as the Head Start "graduates" (and thus were presumed to be a mix of culturally disadvantaged and nondisadvantaged children) were tested once, 4 months after school had been in session. Their mean IQ was found to be 98.37.

The results of the tests are summarized in Exhibit IV-36.

EXHIBIT IV-36 PMA TEST RESULTS (CHESTEEN)

Groups	N	Time Periods			
		Pre-Head Start	Post-Head Start	Preschool	Postschool
Head Start	86	86.35	90.99	93.32 (N=81)	99.11 (N=81)
Control (middle class)	28				112.36
Control (mix)(1)	126			105.68	98.37

Note: (1) Culturally disadvantaged and nondisadvantaged, combined.

Chesteen found that, within the Head Start group, there was a statistically significant IQ mean score change from the pre-Head Start test period to the preschool (September) test period. However, in September the middle-class control group had a significant IQ score advantage over the Head Start children. Thus, while Head Start children were better prepared for school than they were before their Head Start experience, they still were not on a par with their middle-class peers.

It is in light of the above findings that Chesteen's second control group of 126 children is of special interest, because they--not the 28 middle-class children--were the actual classmates and peer-competitors of the Head Start "graduates" in school. It seems clear, then, that after 4 months of school the Head Start children were successfully competing with their actual classmates on the PMA, but continued to be at a disadvantage when compared with middle-class children. It is unfortunate that early summer test results were not obtained on the 126 control children.

Another aspect of Chesteen's study was an analysis to determine on which of the four PMA subtests (Verbal Meaning, Number Facility, Perceptual Speed, or Spatial Relations) the Head Start children would make the most improvement. With pre- and postscores for all 86 Head Start children, he found gains on each of the four subtests significant beyond the .001 level of confidence. However, the greatest mean gains were not in Verbal Meaning (91.14 to 95.35), as one might have predicted in light of large PPVT score gains reported by other investigators, but in Perceptual Speed (83.41 to 92.50) and Spatial Relations (79.55 to 87.02). These findings tend to support Porter's findings that performance on the Seguin Form Board (a measure of learning rate) seemed to be the most consistent indicator of impact of Head Start experience.

Kerns (Reference 66) of the West Virginia Department of Mental Health is directing a study in which all West Virginia children who participated in Summer 1965 Head Start were tested on the Culture Fair Intelligence Test at the beginning of the program. One-third of the children were posttested. At present, preliminary pre- and posttest results are available for only one county comprised of 50 Head Start children, although 52 counties will eventually provide data. There was a mean gain of 20 points in the pre- and post-Culture Fair test scores for the sample. Although statistical analyses were not reported, it appears that the gains may be significant.

Jacobs and Shafer (Reference 62) of the University of Oklahoma studied "Some Effects of Project Head Start on 178 Children in Cleveland County, Oklahoma" on grant funds supplied by the Extension Division of the University of Oklahoma. This study was of special interest because it compared the impact of Head Start on "high-risk" and "low-risk" subgroups of Head Start children. The "risk" factor was defined by pre-Head Start IQ's, as determined by the Goodenough Draw-A-Person test; "high-risk" children were considered to be those with an obtained IQ on the DAP of 85 or less. The high-risk group of Head Start children was tested with the Stanford-Binet test in addition to the DAP.

For the total group (based on a population of 162 children for whom pre- and posttests were obtained), the mean Goodenough IQ increased from an initial 89.41 to 94.45 at the end of the program; this increase was significant at the .001 level of confidence. In addition to this analysis of total group score change, the investigators determined that the children whose pretest scores were below the total group mean of 89 had a mean gain of 11.46 IQ points, as compared with a mean gain of only 1.89 IQ points for the children whose initial DAP scores were above the total group mean of 89. This finding substantiates the Horowitz-Rosenfeld (Reference 59) finding that developmental changes for middle-class children are not reflected over a short time period on some cognitive measures.

One especially pertinent finding stressed in the Jacobs and Shafer study was that 37 percent of the Head Start children obtained an IQ of 85 or less on the first Draw-A-Person test. This percentage is far in excess of normal expectancy, so it can be assumed that the Head Start program (in Cleveland County) actually did reach many children who were lagging developmentally.

Two of the analyses performed by Jacobs and Shafer were purely descriptive and related children's performance on pre-DAP test scores to other variables such as the income of the family or the educational level of the parents. Their descriptive findings are summarized in Exhibits IV-37 and IV-38.

A second study, in addition to that of Jacobs and Shafer, which essentially divided the Head Start children into high- and low-risk groups (e.g., groups less likely and more likely to succeed in school) was "An Evaluation of the Knox County, Kentucky Project Head Start," by Psychological Associates, Ltd., (Reference 4). The two subgroups (totaling 42 children) represented a very isolated and deprived area (Dewitt) and a considerably less isolated and deprived area-environment (Knox Central). Although most of the measures dealt with psychological, emotional, and social assessment, there were a few cognitive measures (Draw-A-Person and Draw-A-Circle, Square and Diamond). There were no significant differences reported from pre- to posttesting on any of the cognitive tasks for either group.

Berlin (Reference 6), University of Washington, obtained Preschool Inventory pre- and post-Head Start measures on 148 children and found significant gains on each of the seven subtest areas taken separately, as well as on the combined areas. Of a possible score of 304, the pretest mean was 197 and the posttest mean was 215. These score changes support Caldwell's expressed hope that the PSI scores would be sensitive to change rather than resistant to change.

Silberstein (Reference 97) directed a study in which 61 Head Start children were pre- and posttested on several measures, both objective and subjective.[1]

The Ammons Full Range Picture Vocabulary Test (AFRPVT) and the Draw-A-Person (DAP) test were used to determine development in

---

[1] Silberstein's data have been submitted on a preliminary basis; more complete analyses are currently under way on the data presented here, as well as on follow-up Head Start and control data obtained in December 1965.

EXHIBIT IV-37 SUMMARY OF PRE-DAP SCORES--GROUPED BY FAMILY INCOME LEVEL (JACOBS AND SHAFER)

Family Income	Number of Subjects	Mean Pre-DAP IQ
A. 5,000+	49	95.33(1)
B. 3,000 to 4,999	62	91.16
C. 0 to 2,999	46	83.00(1)

Note: (1) The differences in IQ between A-C and B-C were significant.

EXHIBIT IV-38 SUMMARY OF PRE-DAP SCORES--GROUPED BY PARENTS' EDUCATION (JACOBS AND SHAFER)

Highest Level of Education Attained by Either Parent	Number of Subjects	Mean Pre-DAP IQ
A. College	30	98.07(1)
B. High School Graduate	53	90.75
C. 9th to 11th Grade	60	89.23
D. 0 to 8th Grade	25	80.40(1)

Note: (1) The difference in IQ between A and D was significant.

terms of mental age. A mean mental age of 58 months (4 years, 10 months) was obtained for both tests. The post-Head Start mean mental ages for the Ammons and the DAP respectively were 72 months and 63 months, thus indicating that verbal skill improvement was very marked.

The Metropolitan Readiness Tests for reading and arithmetic were given, with raw score results as follows:

	Pretest	Posttest	Possible Score
Reading	30.5	35.2	66
Numbers	5.4	6.5	24

On the PSI, the children's scores shifted from a pre-Head Start mean of 128.0 to a post-mean of 142.1, in a scoring system in which the highest possible score obtainable was 210. Exhibit IV-39 details the PSI results reported.[1]

On the Bender-Gestalt Reproductions, a measure of perceptual-motor development, the Head Start children obtained a preprogram mean age-equivalent of 40 months (3 years, 4 months) and a post-mean of 43 months. Silberstein commented that while this 3-month gain over the 6-week program is probably not significant, the focus of the program was not on motor skills but on verbal skills.

Two other studies, both conducted by public schools and locally funded, reported pre- and post-Head Start development in terms of Metropolitan Readiness Test scores.

In a report entitled "Growth of Pupils in Project Head Start as Measured by the Metropolitan Readiness Test" (Reference 17), the author of a local study indicated that a group of 654 Head Start children fell in the tenth percentile on the readiness tests administered in July, 1 week

---

[1] There is a slight unexplained discrepancy between the reported pre- and post-means (128.0 and 142.1) and the added totals-of-subtest pre- and post-means (132.2 and 146.9).

EXHIBIT IV-39 PSI TEST RESULTS (SILBERSTEIN)(1)

Concept Area	Pre-Mean	Post-Mean	Possible Score
Personal orientation	7.4	9.2	15
Body image	15.6	17.0	20
Number concepts	13.6	15.1	25
General information	17.9	24.1	36
Visual discrimination/ association	21.0	21.1	36
Relationships: similarities/differences	13.0	15.0	19
Following instructions	32.8	34.1	43
Comprehension of social roles	10.9	11.3	16
Total	132.2	146.9	210

Note: (1) N = 61.

after the program began. In September, 1 week after school had begun, the same children were retested and fell in the twenty-eighth percentile. Exhibit IV-40 summarizes some of the results reported.

Another local study (Reference 55) reported Metropolitan Readiness Test score shifts for 47 Head Start children and compared the results with scores obtained by a control group composed of all first-grade children in the town. Exhibit IV-41 summarizes the reported results.

Tests of significance indicated that the post-Head Start and control scores were comparable, but that there were significant differences between the pre-Head Start and control group mean scores.

(3) Relationships Between Tests and Studies

The large number of independently designed and operated research projects which studied Head Start during the Summer 1965 program can be considered a mixed blessing. On one hand, information was obtained on test instruments as well as on children; not only did different investigators choose different kinds of measures to supplement the regular Head Start test program, but also several investigators obtained a variety of test results on their samples of children--a practice which provided good information for determining how the same children performed on different tests which were designed to measure similar kinds of functioning. On the other hand, the wide mixture and range of experimental conditions often inhibits the making of valid comparative or differential assessments of Head Start in relation to certain factors of interest (e. g., program variables, sample characteristics, and test variables).

First, let us look at the research studies which included several different tests to assess cognitive or general functioning of a given group of children.

Because of the many variations in sample characteristics (such as age) and methods of reporting scores, only data which were converted to and reported in terms of IQ score points have been included in the following discussion. For many purposes, raw scores are very desirable,

EXHIBIT IV-40 METROPOLITAN READINESS TEST RESULTS (A)

	Poor Risk		Low Normal		Average		High Normal		Superior	
	N	%	N	%	N	%	N	%	N	%
Pre-Head Start	254	39	270	41	89	17	35	5	6	1
Early September	120	18	265	41	172	26	70	11	27	4

EXHIBIT IV-41 METROPOLITAN READINESS TEST RESULTS (B)

	Test Area		
Group	Reading	Numbers	Total
Pre-Head Start	1.77	2.11	1.74
Post-Head Start	2.79	3.36	2.89
Control (first grade)	2.91	3.49	3.06

meaningful and interpretable, but for the present purpose, the variation in children's age is reason enough to look at converted scores which, by definition, take age factors into account. Thus, those studies which reported intelligence test results in terms of subtest scores only, raw scores, or partial scores, or in any irregular manner, have been omitted from the present discussion.

Berger's research study (Reference 5), discussed earlier, used four tests--the PPVT, the Stanford-Binet (S-B), the Leiter International, and the Raven Progressive Matrices[1]--to obtain intertest correlations. For 59 Head Start children, preprogram mean IQ scores of 83, 92, and 84 were obtained on the PPVT, Stanford-Binet, and Leiter International, respectively. The PPVT, then, yielded the lowest mean IQ score, and the Stanford-Binet the highest, on the same group of children, with all tests given during the same test period. The mean IQ score changes[2] (from pre- to post-Head Start) were +9.75, +3.4, and +10.55 on the PPVT, S-B, and Leiter. While the mean gains were statistically significant for all tests, it is evident that the PPVT and Leiter reflected the most change, while the S-B score remained more stable or constant.

The development of vocabulary and verbal skills during Head Start may have accounted for the large increase in PPVT scores. Since the Leiter International is a nonverbal test which requires the child to match objects (for color, size, etc.), one might speculate that in this particular Head Start program, special emphasis may have been given to concept development. In any case, the posttest PPVT and Leiter scores were much closer to the post-Head Start S-B scores.

Eisenberg (Reference 33) obtained both PPVT and DAP scores on one group of about 500 children (including Head Start and non-Head Start children). When the mean scores were converted to IQ estimates, the

---

[1] The Raven scores were not given as IQ scores.

[2] Score changes were based on posttesting of 20 children selected randomly from the total sample of 59.

PPVT yielded a somewhat lower IQ than the DAP at the outset of Head Start. Exhibit IV-42 shows the IQ scores.

Eisenberg found an intertest (DAP-PPVT) correlation of .39, and suggested that the two tests "are sampling different aspects of intelligence."

In order to demonstrate the extent to which the PPVT and DAP were "instruments sensitive to the deficits in the culturally disadvantaged child rather than...accurate measures of his overall cognitive functioning," Eisenberg (Reference 33) tested subsamples of culturally disadvantaged children with other measures. Exhibit IV-43 summarizes his results.

It can be seen that, in Eisenberg's studies, whenever more than one IQ estimate was obtained on a given sample of culturally disadvantaged children, the PPVT IQ estimate was lower than other estimates, while the S-B and CMMS provided somewhat higher estimates.

These findings agree with those of Berger, who also obtained lower PPVT IQ estimates for Head Start children, as compared with estimates obtained from two other IQ tests.

Johnson (Reference 64) obtained IQ estimates on 79 children using both the PPVT and the DAP. His findings are shown in Exhibit IV-44.

In this study, while the pre-PPVT mean IQ score was considerably below the pre-DAP mean score, the greatest gains during Head Start were reflected on the DAP. This apparent inconsistency (i.e., the DAP reflecting more change) is not too surprising in view of the fact that most of the children in Johnson's study were Mexican-American (62 out of 79). There was, in fact, a 36-point differential between the estimated PPVT and DAP IQ scores on the pretests for the Mexican-American group.

Ozer (Reference 82) obtained both PPVT and S-B test results on his sample of 65 children, but he reported the PPVT results in raw score points. For purposes of the present discussion wherein IQ estimates obtained from different sources for the same children are compared, we have roughly converted Ozer's PPVT raw scores to IQ scores. The children's approximate mean chronological age of 5 years, 1 month, places them in the PPVT standardization age group of 4-9 to 5-5. The IQ estimates are shown in Exhibit IV-45. It can be seen that in Ozer's study, also, the

EXHIBIT IV-42 IQ COMPARISONS, DAP AND PPVT (EISENBERG)

	IQ Estimate	
	DAP	PPVT
Pre-Head Start	76 (N = 500)	68 (N = 424)
Head Start, September	82 (N = 435)	81 (N = 413)

EXHIBIT IV-43 IQ SCORES OBTAINED ON DIFFERENT TESTS (EISENBERG)

Sample/Subsample Description	Time of Test	N	Mean IQ			
			PPVT	CMMS[1]	S-B	DAP
Total Sample						
Head Start	Pre-Head Start	500	68[2]			76
Subsample						
Non-Head Start, disadvantaged	NR[3]	23	65.5	83.9	91.3	
Non-Head Start, disadvantaged	Sept.	48	70.5	85.9		
Head Start	Sept.	48	76.7	94.8		
Head Start	Pre-Head Start	34	69.1	84.8	84.2	
Head Start	Post-Head Start		72.8	88.2	90.2	

Notes: (1) Columbia Mental Maturity Scale.
(2) N = 424; basically from the first 500 subjects.
(3) Not specified in report.

EXHIBIT IV-44 PPVT AND DAP IQ RESULTS (JOHNSON)

	N	Mean IQ Estimate PPVT	Mean IQ Estimate DAP
Pre-Head Start	79	72	92
Post-Head Start	79	79	111

EXHIBIT IV-45 PPVT AND S-B IQ ESTIMATES (OZER)

	N	PPVT Raw Score	PPVT Estimated IQ for CA = 4-9 to 5-5	S-B IQ
Early in Head Start	65	35.85	74	
Midprogram	65			88.78
Late in program	65	41.64	85	

mean pre-Head Start PPVT IQ estimate was considerably below that obtained with the S-B.

In addition to the four investigators--Berger (Reference 5), Eisenberg (Reference 33), Johnson (Reference 64), and Ozer (Reference 82)--who used the PPVT and at least one other instrument to obtain IQ estimates, Jacobs and Shafer (Reference 62) used the S-B and DAP to examine the problem of intertest constancy of measured IQ. They obtained S-B IQ scores on 56 children who had obtained IQ scores of 85 or below on the DAP, in order to determine the correlation coefficient between the pre-DAP and the Stanford-Binet, and the post-DAP and the Stanford-Binet. (It should be noted that the Stanford-Binet was administered only once.) Although the pre- and post-DAP mean scores yielded significant gains, both the pre- and postscores correlated significantly with the Stanford-Binet at the .01 level of confidence. (The correlations were +.49 and +.64 for the Stanford-Binet with the pre-DAP and the post-DAP, respectively. The correlations were based on a total population of 56 children, for whom all three test results were obtained; i.e., all 56 children had obtained a pre-Head Start DAP IQ score of 85 or less.) The range of the pre-DAP IQ scores extended from 40 to 85 with a mean of 71.5, and the range of the post-DAP scores was 53 to 117 with a mean of 84.09. The Stanford-Binet range was 46 to 118 with a mean of 85.27.

It is also interesting to observe the shift in the ranges of actual scores. The lower score limit of the DAP shifted from 40 to 53 (from pre- to posttest) and the upper limit was raised from 85 to 117. Following Head Start experience, the IQ score range for the DAP was much more like that for the S-B.

There were, then, five independent researchers who reported, in terms of IQ scores, the results of more than one test of cognitive functioning for a given group. Without exception, all S-B test results yielded higher mean IQ scores.[1]

These findings are interpretable in several ways. Whereas the PPVT is recognized primarily as a test of verbal ability,[2] and culturally disadvantaged children tend to have less verbal skill, the S-B presumably covers a wider range of abilities, so the child has more opportunities to demonstrate capability. It may be that, for some children, tests which are intended to be simple, in terms of limiting the complexity of required responses, are really a handicap. If the child is unable to make the particular kind of response needed, he has no opportunity to demonstrate whatever ability he does have on a task more compatible with his abilities.

It is also possible that the inconstancy of IQ scores obtained from the PPVT and other tests is a function of the nature of the standardization samples of the tests. The PPVT was standardized on a fairly limited sample of 4,012 white children in and around Nashville, Tennessee. Since PPVT raw scores are converted to IQ scores in relation to the performance of the white Nashville children, the low PPVT IQ scores of the children in the Head Start studies may mean merely that the culturally disadvantaged children have a considerably different vocabulary from that of the Nashville children.

A final point to be mentioned concerns the raw score increase over time, and particularly the question of the gains in raw scores expected to occur "naturally" over time. This problem takes on particular significance when (1) the time interval is fairly short, (2) expected gains are small, and (3) the reliability of the test is uncertain for the population and administration conditions involved.

---

[1] It is interesting to note that the S-B means in all cases were higher than the mean IQ of 80.7 (S.D. = 12.4) obtained by Kennedy, Van de Riet, and White when they used the Binet, Form L-M, to obtain normative data on 1,800 Negro elementary school children in five southeastern states (Reference 65).

[2] See Dunn's discussion of validity (Reference 30). See also an interesting critique of the PPVT type of test by Church, (Reference 20, pages 172 ff).

Unfortunately, there are too few data to deal with the question adequately at this time. The Expanded PPVT Manual (Reference 30), cites three studies with fifth grade, seventh grade, and preschool children showing that IQ point changes averaged less than two points over a 2- to 7-day interim between test periods. Inspection of the Manual indicates that, in general, in the raw score range of 23 to 52, one raw score point usually accounts for about 1 month of mental age. Thus, over an 8-week period, one might reasonably expect an approximate gain of two raw score points on the PPVT. Allerhand (Reference 2), in studying the feasibility of using indigenous Head Start parents to administer the PPVT and PSI (Preschool Inventory), obtained test-retest scores with a 5-day interim. Allerhand's study did not report actual scores, but it did indicate that the mean test-retest raw score difference on the PPVT was 2.1, which was not statistically significant.[1]

It appears that the evidence concerning test-retest reliability of the PPVT, especially with culturally disadvantaged children, is limited and inconclusive, but there are some indications that it is a fairly stable measure when the test-retest interval is small.

It seems fitting to close this subsection by quoting the final paragraph in "Guidelines for Testing Minority Group Children." The problems of test purposes, interpretation, and uses are simply and succinctly put (Reference 45, page 144).

> In testing the minority group child it is sometimes appropriate to compare his performance with that of advantaged children to determine the magnitude of the deprivation to be overcome. At other times it is appropriate to compare his test performance with that of other disadvantaged children–to

---

[1] However, he did find that the PSI test-retest scores were statistically significantly different. Pierce-Jones also obtained significantly different PSI results over a test-retest interim of about 11 days.

determine his relative deprivation in comparison with others who have also been denied good homes, good neighborhoods, good diets, good schools and good teachers. In most instances it is especially appropriate to compare the child's test performance with his previous test performance. Utilizing the individual child as his own control and using the test norms principally as "bench marks," we are best able to gauge the success of our efforts to move the minority group child forward on the long, hard road of overcoming the deficiencies which have been forced upon him. Many comparisons depend upon tests, but they also depend upon our intelligence, our good will, and our sense of responsibility to make the proper comparison at the proper time and to undertake proper remedial and compensatory action as a result. The misuse of tests with minority group children, or in any situation, is a serious breach of professional ethics. Their proper use is a sign of professional and personal maturity.

(4) Summary

In summary, 20 investigators, most of whom were funded by the Office of Economic Opportunity, assessed the impact of Operation Head Start on participating children during the summer of 1965 in the area of cognitive and general development. A number of instruments were used, including the Peabody Picture Vocabulary Test, the Stanford-Binet, the Goodenough Draw-A-Person test, the Seguin Form Board, the Primary Mental Abilities test, the Caldwell-Soule Preschool Inventory, and the Metropolitan Readiness Tests.

Although there was wide variation in experimental design, and research considerations often were somewhat strained due to practical considerations, all studies without exception indicated some degree or kind of positive changes in the Head Start children.

The results of studies which were able to compare Head Start groups with non-Head Start, middle-class, or non-culturally deprived children, tended to suggest that, while the Head Start children themselves made significant gains during the program (that is, with each child considered as his own control), they were still somewhat (often significantly) below their middle-class peers, with whom they would be competing in school. However, when the control group was drawn from the same sort of population from which the Head Start children were drawn, the post-Head Start children's scores were higher than those of the control children, indicating that the Head Start children were indeed more school-ready than their disadvantaged peers, although not as school-ready as their non-deprived peers. The very few studies that obtained comparative test data on both Head Start and non-Head Start children who had been in school (kindergarten) for about 2 months suggested that by the end of about 2 months of school, the 2 groups of children were again comparable on some measures.

It may be noted that there is some indication in the research literature that differences between Negro and white children are much less noticeable in the early years. Osborne (Reference 81), using intelligence and academic achievement tests, reported widening gaps between Negro and white children as they grew older. In Deutsch's study (Reference 28), white-Negro intelligence test comparisons were analyzed in relationship to grade in school (first or fifth) and participation in some preschool activity. He reported "presence or lack of preschool experience at grade 5 more highly differentiates intelligence test scores than it does at grade 1" (p. 33). Obviously, long-range follow-up studies are needed to evaluate such differences.

Because of the wide variation in data collection and reporting, it is difficult to make sophisticated interstudy comparisons of test results. But despite the many problems discussed concerning the meaning and interpretation of the various reports, it seems clear from the independent studies that children who participated in Head Start changed somewhat in the course of the program. It would seem, as many investigators pointed out, that changes can and do in fact occur to some measurable extent, even during such a short (6 to 8 weeks) program as Head Start. The degree and kind of change seem to vary at least with the type of measurement made and the initial level of the group, but changes suggesting improvement in cognitive functioning are quite consistently reported.

3. Emotional and Social Areas

The data concerning impact in areas of emotional and social development appeared to be so closely interrelated that for this report all information available in these impact areas will be included in the present section, rather than separately.

In this section, the available evidence relating to the impact of Head Start on children's school behavior, school adjustment, personal adjustment, emotional health, fantasy life, self-identity, personality traits or characteristics, social behavior, and social experiences will be discussed.

One of the Head Start inventories designed to assess changes in "emotional adjustment," "social maturity," and "cognitive activity" was the Behavior Inventory (BI), which was scheduled for administration both early and late in the Head Start program. Berlin (Reference 6) included the BI among the several measures he used to evaluate Head Start. For 131 children, he found significant pre- and post-Head Start improvement in only one area, "cognitive activity." Significant changes in "emotional adjustment" and "social maturity" were not reflected by the Behavior Inventory.

The study in Knox County, Kentucky, conducted by Psychological Associates, Ltd. (Reference 4), was particularly concerned with changes in noncognitive areas. Seven measures for assessing certain psychological and emotional characteristics before and after the Head Start program were used. These included: (1) interactions (e.g., smiling at the examiner and eating proffered candy); (2) interview (10 simple questions, such as: "What is your name?"); (3) sociometric choice (the child scores if he can identify any friend by name); (4) three wishes (an index of goals and desires); (5) draw-a-man (an index of self-esteem); (6) three commissions (directions for three simple tasks given in one instruction); and (7) drawing (a circle, a square, and a diamond figure).

Results of the pre- and post-Head Start evaluations of Knox County Head Start children were analyzed for the total group as well as for two subgroups representing levels of environmental isolation and deprivation. For the subgroup analyses at the beginning of Head Start, the two groups differed significantly on all measures except sociometric choice, self-esteem, and drawings (circle and diamond figures). The less deprived and isolated children (Knox Central) scored better than the more deprived Dewitt children, who appeared to be (1) more socially inept, (2) less aware of their peers, (3) less concerned with specific goals and desires, and (4) less able to integrate and respond to stimuli from their environment. At the end of Head Start, however, the two subgroups were comparable on all measures except "three wishes," where the Knox Central group continued to express more concern with goals and desires than the more deprived Dewitt group. The total-group analyses (i.e., both programs or subgroups combined) indicated statistically significant pre- and post-Head Start gains on all measures of psychological, emotional, and social development.

Silberstein's study (Reference 97) included a pre- and post-Head Start behavior rating scale, as well as the measures of cognitive development discussed earlier. The observations were made by a trained observer and by the child's teacher; a 5-point scale was used to rate cooperation with adults, aggressive reactions, ability to postpone gratification, restraint of motor activity, type of motor activity, verbal skills, and quality of speech. Although analysis of the data has not yet been completed and statistical significances have not been computed, the mean scale-point gains show a consistent trend toward more positive ratings during the latter part of the program.[1]

A provision for ratings of behavior changes for Head Start children was included in Eisenberg's studies (discussed earlier in this section). Although detailed enumeration and analyses of the ratings were not available at the time he submitted his preliminary report, Eisenberg did comment that Head Start children showed positive (favorable) changes in their orientation to clinical testing. In the report on one of his studies, Eisenberg stated:

> It was very clearly observed by the examiners that Head Start youngsters were much more able to respond to adult instructions than were the controls. Their attention span was definitely longer and their ability to comprehend complex instructions was superior.

Eisenberg's subjective observations were supported by a similar statement made by Jacobs and Shafer (Reference 62) concerning qualitative changes in Head Start children during the program:

> In a large number of cases, a greater degree of organization, a greater accuracy of perception, and, in general, better form quality were found (for the DAP drawings). On the basis of clinical

---

[1] On a 5-point scale, all pre- and post-mean ratings fell somewhere in the range of 3.0 to 3.8. The mean differences ranged from .1 to .4.

> impression, it could be inferred that the child had grown in his ability to differentiate himself and his world, and had formed a finer sense of identity during his participation in this (Head Start) program.

A report of the San Diego City schools' Summer 1965 Head Start program included the results of two questionnaires which related to the psychological and emotional well-being of the children (Reference 10).

The first questionnaire was directed to 29 parent helpers and indicated a unanimous acceptance of the program. In response to the question, "How were children helped?" the following were listed: better school adjustment, growth in social adjustment and cooperation, self-control, and security and independence.

The second San Diego questionnaire was directed to present (Fall 1965) kindergarten teachers of children who had participated in the Summer 1965 Operation Head Start. Of the 23 teachers who responded, 92 percent said that the Head Start children seemed to be more ready for school than non-Head Start children; one teacher said that she noticed no difference. Eighty-seven percent indicated that in their opinions, prekindergarten experience positively (favorably) affected their classes, while 13 percent noticed no apparent effect of prekindergarten experience. Specific characteristics of children with preschool experiences were given by the 87 percent as better language development, better social adjustment, better conformity to group behavior and routine, and longer attention span with better listening ability.

Zimmerman's study (Reference 112) also included a measure of school readiness. In September, a rating questionnaire was given to kindergarten teachers of 59 children who had participated in Head Start and 59 children who had not participated in the summer 1965 program. The children, whose median IQ's were similar, reflected significant differences in school behavior; Head Start children did better (at a .001 level of confidence) in all four rated categories: Individual Behavior, Group Behavior, Mental Alertness, and Physical Traits.

Two independent studies, one from Warminster Township (Reference 52), and one directed by Harding (Reference 47), reported their analysis of the item on Head Start's Paid and Voluntary Worker's Evaluation Form ("I feel that, in general, children attending the Operation Head Start program were changed in the following ways ..."). Exhibit IV-46 summarizes the responses reported in the two studies and presents a picture of considerable improvement in some behaviors, in the opinion of the Head Start staff in these programs.

Johnson's study (Reference 64) of the Clavis Montessori schools reported significant changes in children during Head Start, as determined by teacher ratings of social-emotional characteristics such as "attitude toward school," "adjustment to group situations," "independence from mother," and "child's interest in program."

From Hawaii, Edith Doi (Reference 29) reported that 250 kindergarten teachers rated children after they had been in the kindergarten classes for 2 months. The majority of teachers rated the Head Start children as similar to non-Head Start children on all items of school adjustment. However, not all investigators found such enthusiastic response by kindergarten teachers to the behavior of their "Head Start graduates." In interviews with 22 kindergarten teachers (representing 17 classrooms) where Head Starters were enrolled in the fall of 1965, Van Egmond (Reference 105) found a somewhat cooler view of the children's classroom behavior. A summary of the interviews is shown in Exhibit IV-47.

It is clear from Exhibit IV-47 that some kindergarten teachers did not see the Head Start children as easy to manage. However, Van Egmond included the following comment in his report.

> Although the teachers did not tend to view this (unruly) behavior in a favorable light, their comments provided ample indication that children who participated in the summer program were inclined to actively explore the environment of the classroom, to try out materials and equipment, to feel at ease in the kindergarten situation, to be more outgoing, and to verbalize and request help or information from the teacher to a much greater degree than children who did not have the Head Start experience.

EXHIBIT IV-46 IMPACT ON SOCIAL BEHAVIOR (HARDING, WARMINSTER TOWNSHIP)

		Percent Teachers Rating				
Social Behavior Item		Much Better	Better	No Change	Worse	Much Worse
Getting along with other children	A(1)	69	31	-	-	-
	B(2)	55	44	-	-	-
Self-confidence	A	56	44	-	-	-
	B	44	55	-	-	-
Speaking ability	A	56	44	-	-	-
	B	33	66	-	-	-
Can do things on his own	A	56	44	-	-	-
	B	33	66	-	-	-
Everyday manners	A	50	38	12	-	-
	B	66	33	-	-	-
Interest in new things	A	38	62	-	-	-
	B	55	44	-	-	-
Does what he is told	A	31	56	6	6	-
	B	44	55	-	-	-
Finishes what he starts	A	19	69	12	-	-
	B	33	44	22	-	-

Notes: (1) Group A refers to Harding's study, and represents 16 Head Start staff members.

(2) Group B refers to Warminster County, and represents 9 Head Start staffers.

EXHIBIT IV-47 IMPACT ON CLASSROOM BEHAVIOR (VAN ECMOND)

Question or Item	Number and Description of Responses		
1. Any items in which Head Start children seem to be better prepared for school as compared with non-Head Start children?	13 No	4 Yes	5 Cannot Generalize
2. Degree to which children accept classroom routine and limits	16 With Difficulty	1 Better	5 No Difficulty
3. Participation in learning task set by teacher	22 No Difference or Cannot Generalize		
4. Social relationships with other children	8 No Difference	8 Better	6 Cannot Generalize
5. Any disadvantage attributable to Head Start?	6 No	16 Early Management Problems	

In addition to the teacher interviews, Van Egmond's study included classroom observation and rating of behavior using Bellack's formulation in which school is viewed as a game, and the players (children) are either "with it" or "not with it."

Head Start children who were enrolled in kindergarten in the fall of 1965 and non-Head Start children were matched by sex and presence in the same classroom. There were 50 Head Start boys and 50 non-Head Start boys, as well as 54 Head Start girls and 54 non-Head Start girls involved in the study.

Van Egmond found a substantial similarity in the extent to which both Head Start and non-Head Start kindergarten children responded to task requirements and classroom social situations. Consistent with findings in child development studies, he found girls (Head Start and non-Head Start) more adaptive to the classroom than boys.

Porter (Reference 87) reported observations of 31 Head Start and 35 non-Head Start children made on the first or second day of the fall 1965 school year. Like the psychometric evaluations done for the study, all ratings were made by trained observers who did not know which children had participated in Head Start and which had not.

In general, Head Start children found it somewhat difficult to fit into the structured first 2 days of class; they showed resistance to being led from one activity to another at the behest of the teacher. Porter warned that the findings of differences between the two groups were too meager, despite the generalizations above, to permit conclusions; it did seem evident, however, that the Head Start experience did not prepare these children for an exceptionally well-adjusted "first day in school."

Holmes and Holmes (Reference 58) reported two studies which shed light on the areas of emotional and social development.

A series of observations on 32 Head Start children early and late in the program gave evidence of some significant favorable changes in goal orientation, goal attainment, expressed self-esteem, reaction to frustration, and emotional reaction. It should be noted that the changes were observed during the Head Start program, and not in kindergarten.

The second study used a projective technique (similar to the TAT, or Thematic Apperception Test) in which the children were asked to tell a story about each of three pictures. This study used both Head Start and non-Head Start children (with 29 children in each group) so that comparisons could be made between the two groups to determine the effect of Head Start on the children's fantasies about their peers, adults and play, in general.[1] The projective test was administered twice to all children; the first time period was in August after the Head Start program and the second was in November after both groups had been in kindergarten for about 2 months. Unfortunately, no pre-Head Start measurements were made in this study. However, extensive comparability checks indicated that the two groups would have been fairly similar in June (pre-Head Start). The results of the scorings are summarized in some detail in Exhibit IV-48.

The detail presented in Exhibit IV-48 will permit careful inspection of the results, in regard to the provocative findings reported by Holmes and Holmes. They found that in August the children who had participated in Head Start were significantly more positive (or adjusted) in all four categories, but in November the two groups were comparable in all four categories. Thus, it would appear that while Head Start had an impressive impact on the children in emotional areas as measured by the TAT-like projective technique, this impact was about the same as the impact of 2 months in school on the same areas in non-Head Start children.

An interesting clinical finding reported by the investigators resulted when they compared the projective test results with the behavior-observation ratings for the Head Start children. (Non-Head Start children were not rated on behavior, as those ratings were made only during the Head Start program.) On the ratings of actual behavior, the Head

---

[1] There was substantial comparability between the children in the two groups on the following criteria: lack of previous school experience (none for either group), age (mean age of 5 years, 5 months, for each group), sex, ethnic background, presence of parents, and education and occupation of major parental wage-earner.

EXHIBIT IV-48 SUMMARY OF PROJECTIVE TEST RESULTS (HOLMES AND HOLMES)

	Head Start (N = 29)								Non-Head Start (N = 29)							
	August				November				August				November			
Category/Characteristic	+	-	0	Total	+	-	0	Total	+	-	0	Total	+	-	0	Total
A. Quality of interaction between main characters mentioned in story	36	40	38	114	25	35	34	94	28	22	59	109	30	32	30	92
B. Degree of investment on the part of main characters in story	75	39	0	114	60	34	0	94	55	54	0	109	55	37	0	92
C. Effect with which the activity was invested	34	45	35	114	34	42	18	94	30	27	50	107	30	32	32	94
D. Degree to which activity was constructive or destructive	48	35	31	114	35	42	17	94	34	21	54	109	31	31	30	92

Start children showed a considerable shift to less aggressive social behavior over the course of their Head Start involvement (in July and August), but the projective technique indicated significantly more aggressiveness in their fantasy life, as compared with the non-Head Start children (who were very similar to the Head Start children on several criteria) in August. It would appear, according to Holmes and Holmes, that during a socializing experience like Head Start (or kindergarten), the children become more able to bring hostile impulses and behavior under control.

The largest reported independent study concerned with social development was directed by Lamb at the University of Delaware. His study involved more than two-thirds of the Head Start children in that state. There were both experimental (Head Start) and control (non-Head Start) groups; both groups received two tests. The 770 Head Start children were given a shortened version of the Self-Social Symbols Tasks[1] before and after their program participation; the 100 control group children, who were somewhat comparable to the Head Start group on many variables, including general socio-economic backgrounds, were tested in their homes during the same two time periods that the Head Start children were being tested. Exhibit IV-49 summarizes some selected sample characteristics.

Two of the primary purposes of the study were: (1) to determine to what extent the development of self-social constructs of the Head Start children would differ from that of a somewhat comparable control group, and (2) to determine to what extent, if at all, Head Start children would develop "appropriate social trust."[2]

Statistical analyses revealed significant differences between the Head Start and non-Head Start children on only 2 of the 11 tasks: (1) the Head Start children increasingly identified with the teacher and saw

---

[1] The Self-Social Symbols Tasks were developed by Ziller, Alexander, and Long in 1964, at the University of Delaware to measure self and self-other relationships.

[2] For discussion of other aspects of Lamb's study, see subsection IV. E.

EXHIBIT IV-49 SELECTED SAMPLE CHARACTERISTICS (LAMB)

		Male		Female			Age			
		White	Negro	White	Negro	Total	Four	Five	Six	Seven
Head Start	N	129	239	106	296	770	25	325	385	35
	%	16.7	31.2	13.7	38.4	100	3.2	42.2	50.0	4.6
Control	N	27	40	12	21	100	19	46	31	4
	%	27.0	40.0	12.0	21.0	100	19.0	46.0	31.0	4.0

her as less threatening, and (2) Head Start children shifted significantly toward a perception of self as similar to others (as opposed to different from others).

Other comparisons between the two groups, while not yielding statistically significant results, were seen by the investigator as evidence of substantial and interesting trends. For example, there was a tendency for Head Start children toward a balanced power perception of the policeman, as well as the teacher. With respect to variables of sex and race, white females appeared to gain the most from their Head Start experience in the development of self and self-other constructs. As stated by Lamb, "those children who changed little, if at all, in their self and self-other constructs were Negro males. White male and Negro female children fell somewhere between those two groups in their development."

A further finding was described in the following way: "Head Start children initially had unrealistic perceptions of the sharing situation. As a result of the daily interpersonal give and take in Head Start, more nearly normal, realistic perceptions and attitudes were developed with regard to social trust."

In addition to the 15 independent researchers whose studies concerned the impact of Head Start in areas of the children's psychological, emotional, and social development, there were several other sources of information pertaining to the same areas.

Head Start staff and workers' opinions of the effects on the children of participation in the program were sought on an OEO form, the Worker's Evaluation Form.

Exhibit IV-50 shows the distribution of opinions in a sample of 6,320 paid and voluntary workers in 423 Child Development Centers across the country. These opinions concerned ways in which the children changed as a result of participating in Head Start.[1] For each item,

---

[1] The general nature of the sample of workers is discussed in Section II and will not be repeated here.

EXHIBIT IV-50 CHANGES IN HEAD START CHILDREN (WORKERS' OPINIONS)[1]

Workers's Evaluation Item Number	Percent					
	Much Better	Better	No Change	Worse	Much Worse	No Response
19(1) Getting along with other children(2)	68.6	30.7	0.7			
(2) Self-confidence	45.9	47.3	1.3	0	0	5.5
(3) Speaking ability	41.2	49.1	4.2	0	0	5.5
(4) Everyday manners	42.5	49.2	2.9	.1	0	5.3
(5) Finishing what he starts	28.2	60.2	4.9	.1	.1	6.5
(6) Doing what he is told	38.5	52.7	2.6	.2	.1	5.9
(7) Interested in new things	57.5	35.0	1.7	0	.1	5.7
(8) Can do things on his own	37.8	53.4	2.6	0	.1	6.7
(9) Chances of success in kindergarten	58.7	33.3	1.0	0	0	7.0

Notes: (1) N = 6,320.

(2) Percentages for this item based on N = 3,653. The number (.7) shown as "No Change" includes Worse and Much Worse.

a percentage of the total sample making a given response is shown. The percentages in the column entitled "No Response" were obtained by subtracting the total number of responses to the item from the total sample size and converting the difference to a percentage. The items are numbered according to their number on the evaluation form.

The exhibit shows the following points of interest. Generally, the workers in the sample believed that the children had improved in a number of ways. In particular, a majority felt that the children were much better in getting along with other children and were much more interested in new things. Otherwise, the modal opinions were that the children were at least better in the other behavior patterns shown in Exhibit IV-50.

Chi-square tests were made of the distributions of responses to each item by each of the four types of CDC workers (paid and volunteer professional, neighborhood paid, etc.). The statistic was significant beyond the .05 level in each case. This was generally because of the much greater proportion of "Much Better" responses by the professionals. Interestingly, the modal response of the professionals was "Much Better" for Items 1, 2, 3, 4, 7, and 9 and "Better" for Items 5 and 8.

It might be supposed that staff members would feel that the program should be prolonged to support the desired changes in the children. Out of 2,857 comments written on a sample of 6,433 Worker's Evaluation Forms, 340 urged a continuing and/or expanded Head Start program, or establishment of a kindergarten. However, a number of workers (45) commented that the length of the school day and/or the program was too long. Statements in this category were to the effect that after 6 weeks children of preschool age lost interest, slacked off in attendance, and generally grew weary. Some felt that shortening the program day or the length of field trips would help and noted that the children they observed characteristically grew tired or restless in the afternoon.

The largest portion (751 out of 2,857) of the voluntarily appended remarks on the Worker's Evaluation Form were that the children benefited. However, no one volunteered to define a "good" program other than to cite either the emotional benefits that the children derived or the imaginative, whole-hearted efforts of the staff. Some workers (54) felt the value of the program for the children might be lost if there were no follow-up, especially in the areas of medical, dental, or psychiatric treatment, as well as in cultural and educational areas. With respect to the latter, some workers who commented expressed the reservation that the program would be of value only to children going on immediately to school in the fall.

Three of the items on the National Opinion Research Center (NORC) parent interview concerned the parental opinions of the effect of Head Start on their children, and were identical to the questions directed at Head Start workers and summarized in Exhibit IV-50 above.

Exhibits IV-51, IV-52, and IV-53 summarize the NORC results for these items for the total NORC sample and for white and Negro parents separately. An asterisk next to an item in Exhibit IV-51 indicates a significant difference at the 5 percent level between white and Negro responses.

Exhibit IV-51 indicates that, in general, the parents believed that their children had improved in a number of areas as a result of Head Start. Of the parents interviewed, 95 percent said that Head Start had had good effects on their children, while only 2 percent stated that Head Start had had bad effects (see Item 5). The exhibit indicates that most of the parents felt that Head Start provided a number of social experiences for their children, such as trips into the community and play activities (see Item 3).

Item 6 in Exhibit IV-51 shows that the majority of parents believed that their children, as a result of Head Start, were much better or somewhat better in the eight characteristics listed (getting along, self-confidence, speaking, manners, completing tasks, obedience, interest in new things, and independence).

EXHIBIT IV-51 CHANGES IN HEAD START CHILDREN - PARENTS' OPINION (TOTAL)[1]

NORC Item Number			Percent							Significant Differences
						If Yes, Was It Worthwhile?				
			Yes	No	Don't Know	Very Much	All Right	Waste of Time	Don't Know	Negro vs. White
3., 4.		As part of the Head Start Program did (child):								
	A.	Have a medical examination?	84	13	3	70	13	<1	6	*
	B.	Have a dental examination?	69	25	6	59	10	<1	1	*
	C.	Take any trips in the community?	87	10	2	76	11	<1	<1	
	D.	Get to know any new toys or games?	88	5	6	74	14	<1	<1	*
	E.	Get to see or hear a lot of books, stories, and music?	91	2	6	80	11	<1	<1	
	F.	Get any individual attention from the teacher?	62	13	25	54	8	<1	2	*
	G.	Have a chance to take part in group activity with other children?	93	1	5	82	11	0	<1	*
5.	A.	Did Head Start have any bad effects on the child?	2	61	<1					
	B.	Did Head Start have any good effects on the child?	95	2	1					

			Much Better	Somewhat Better	About Same	Somewhat Worse	Much Worse	Don't Know	
6.		What was the effect of Head Start on the child with regard to the following:							
	A.	Getting along with other children	50	27	22	<1	0	<1	*
	B.	Self-confidence	40	36	22	<1	0	<1	*
	C.	Speaking ability	38	30	30	<1	0	<1	*
	D.	Everyday manners	35	35	29	<1	<1	<1	*
	E.	Finishing what he starts	29	36	33	<1	0	<1	*
	F.	Doing what he is told	30	33	35	1	<1	<1	*
	G.	Being interested in new things	55	29	14	<1	0	<1	*
	H.	Being able to do things on his own	48	32	19	0	0	<1	*

Note: (1) N = 2036.

EXHIBIT IV-52 CHANGES IN HEAD START CHILDREN - PARENTS' OPINION (WHITE)(1)

NORC Item Number			Percent						
						If Yes, Was It Worthwhile?			
			Yes	No	Don't Know	Very Much	All Right	Waste of Time	Don't Know
3., 4.		As part of the Head Start Program did (child):							
	A.	Have a medical examination?	80	17	3	61	17	2	<1
	B.	Have a dental examination?	61	32	6	47	14	1	<1
	C.	Take any trips in the community?	86	12	1	73	13	<1	<1
	D.	Get to know any new toys or games?	83	7	9	66	17	<1	<1
	E.	Get to see or hear a lot of books, stories, and music?	90	2	7	78	11	<1	<1
	F.	Get any individual attention from the teacher?	53	15	31	46	7	<1	<1
	G.	Have a chance to take part in group activity with other children?	90	1	8	79	11	<1	<1
5.	A.	Did Head Start have any bad effects on the child?	3	95					
	B.	Did Head Start have any good effects on the child?	93	2					

			Much Better	Somewhat Better	About Same	Somewhat Worse	Much Worse	Don't Know
6.		What was the effect of Head Start on the child with regard to the following:						
	A.	Getting along with other children	39	29	29	<1	-	<1
	B.	Self-confidence	33	35	28	<1	-	2
	C.	Speaking ability	33	29	36	<1	-	<1
	D.	Everyday manners	25	35	36	2	<1	<1
	E.	Finishing what he starts	22	32	42	<1	<1	1
	F.	Doing what he is told	18	33	45	2	<1	<1
	G.	Being interested in new things	45	32	20	1	1	2
	H.	Being able to do things on his own	37	35	25	-	-	1

Note: (1) N = 832.

EXHIBIT IV-53 CHANGES IN HEAD START CHILDREN - PARENTS' OPINION (NEGRO)(1)

NORC Item Number			Percent						
						If Yes, Was It Worthwhile?			
3., 4.		As part of the Head Start Program did (child):	Yes	No	Don't Know	Very Much	All Right	Waste of Time	Don't Know
	A.	Have a medical examination?	86	10	3	76	10	<1	1
	B.	Have a dental examination?	74	20	5	67	8	<1	1
	C.	Take any trips in the community?	88	9	2	78	10	-	1
	D.	Get to know any new toys or games?	91	3	5	80	12	-	<1
	E.	Get to see or hear a lot of books, stories, and music?	92	3	5	81	10	<1	<1
	F.	Get any individual attention from the teacher?	67	12	20	59	9	<1	3
	G.	Have a chance to take part in group activity with other children?	95	1	3	85	10	-	<1
5.	A.	Did Head Start have any bad effects on the child?	1	98	<1				
	B.	Did Head Start have any good effects on the child?	96	1	<1				

6.		What was the effect of Head Start on the child with regard to the following:	Much Better	Somewhat Better	About Same	Somewhat Worse	Much Worse	Don't Know
	A.	Getting along with other children	57	26	17	<1	-	-
	B.	Self-confidence	45	35	18	<1	-	<1
	C.	Speaking ability	42	29	27	<1	-	<1
	D.	Everyday manners	41	34	24	<1	-	<1
	E.	Finishing what he starts	33	38	27	<1	-	<1
	F.	Doing what he is told	37	32	29	7	<1	<1
	G.	Being interested in new things	62	26	11	<1	-	<1
	H.	Being able to do things on his own	55	29	15	-	-	<1

Note: (1) N = 1,129.

Since both the parents and the Head Start staff responded to the same eight questions in Exhibit IV-51 (Item 6) relating to impact, it is interesting to compare the opinions expressed by the two groups. Comparison of the data (Exhibit IV-50 and IV-51) shows that for all items a much higher percentage of parents believed that their children were "about the same." Some possible explanations for this outstanding discrepancy might be that the parents simply did not notice the change, or the children behaved differently at home, or the parents did not appreciate the change in "speaking ability" and "everyday manners," or the Head Start teachers had some bias (enthusiasm) which led them to see more change than actually occurred.

The apparent discrepancy between the ratings of the Head Start teachers and the Head Start parents is especially interesting because it is somewhat consistent with the discrepancies between various ratings of social behavior made by Head Start teachers and the kindergarten teachers who received the Head Start children into their fall 1965 classes. It appears that the children's social behavior may have improved only for the actual Head Start program and may not have improved much at home or at regular school. Follow-up studies would be needed to determine lasting (or latent) effects of Head Start on behavior.

An analysis of the NORC items described in Exhibit IV-51 was also made whereby the parents were grouped by race (white and Negro) and comparisons were made to determine to what extent different responses were made to the same questions by parents of different races. The results of the analyses are shown in Exhibits IV-52 and IV-53, although the occurrences of findings of significant differences are indicated in Exhibit IV-51 with asterisks.

The exhibits show that for Items 3 and 5, Negro parents responded "Yes" more frequently for dental examination, new toys and games, individual attention, and group activities; they responded "No" more frequently for bad effects of Head Start. All tests for differences for subitems in Item 6, regarding the effect of Head Start on the child, were significant with the Negro parents responding that their children had improved more than the white parents felt that their children had.

In summary, there were 15 independent researchers who studied Head Start children in relation to the effects of the program on their psychological, emotional, and social development. In addition, impact data were obtained from more than 6,000 Worker's Evaluation Forms and nearly 1,750 Head Start parents.

Although considerable variations, and even inconsistencies, appear to exist among the several data sources, some findings emerge. Head Start teachers tended to rate the children considerably higher in most areas relating to behavior than did Head Start parents or kindergarten teachers who had not been involved in Head Start but in whose classes the Summer 1965 children are now enrolled. But even when the kindergarten teachers express their opinions about the alertness, curiosity, independence, and self-awareness of their "Head Start graduates" (as contrasted to opinions about behavior per se), they frequently indicate that Head Start children are superior to non-Head Start children.

One implication is that regular school teachers admire qualities of alertness, curiosity, and independence but frown upon the behaviors that often accompany the qualities.[1] At any rate, positive developments or changes in at least some psychological, emotional, and social areas were reflected to some extent by all sources of data.

A major question to be considered in the interpretation of all studies which compared Head Start children with non-Head Start children is who the non-Head Start children were. The finding that some kindergarten teachers saw no significant differences in behavior or school readiness characteristics between their Head Start and non-Head Start pupils might at first lead one to assume that the Head Start impact was negligible. However, this finding could be considered highly favorable to the Head Start program if the comparison group of non-Head

---

[1] Research supporting this point is reviewed by Stern (Reference 101).

Start children were culturally advantaged children. Indeed, one of the aims of the Head Start program was to place the deprived youngsters on an equal footing with their nondeprived or advantaged peers. Unfortunately, while Head Start and non-Head Start groups were often matched for age, sex, presence in the same classroom, or other variables, they were not matched for level of family income or other indices of cultural and economic deprivation.

Therefore, to the extent that Head Start children were compared unfavorably with nonculturally deprived children on some criteria, it must be considered that their school adjustment may have been attributable at least in part to their life-long environmental deprivation, rather than to the experiences in the Head Start program, which some teachers believed encouraged unruly, nonconformist behavior.

There is certainly considerable evidence attesting to some positive (favorable) effects of Head Start. There is, however, much need for further definition and measurement of criterion variables. Provision for careful and systematic follow-up seems most urgently needed in future evaluation programs.

D. Impact of Head Start on Parents

The three primary sources of information concerning the impact of Head Start on parents of Head Start children were (1) the National Opinion Research Center (NORC) interviews of parents, (2) the Head Start staff's and workers' opinions concerning Head Start's effects on parents, and (3) the independent studies.

Exhibit IV-54 summarizes the relevant data for the total NORC sample (1,742 parents), and Exhibits IV-55 and IV-56 show the results of those data separately for white and Negro parents, respectively.

Exhibit IV-54 indicates that a very large percentage of parents had an opportunity to talk with their child's teacher; 31 percent were able to become acquainted with other parents; and 23 percent had some opportunity to talk with a social worker or counselor. These Head Start-related activities were judged as fairly or very much worthwhile by almost all parents to whom the items applied.

The data in Exhibit IV-54 (Items 1D-J) do not indicate what percent of parents attended any kind (unspecified) of special meeting, so one cannot determine to what extent the percentages of the parents in Items 1D-H and 2D-H are represented more than once. It is clear, however, that the large majority of parents who did attend special meetings considered them very much worthwhile. The same findings appear for the remaining categories--of the few parents who did see films and go on trips, a large majority considered the activities very much worthwhile.

Item 7 of Exhibit IV-54 (referring to Item 7 on the actual NORC form--see Appendix A) indicates that a very small percentage of the parents themselves received help, improved their job status, or planned to continue their own education as a result of Head Start.

Item 8 indicates that an overwhelming majority (88 percent) of parents interviewed expressed a more hopeful outlook for their child's future as a result of Head Start; 80 percent expressed a new awareness of community concern for their problems.

Exhibits IV-55 and IV-56 show the percentages of responses to the same questions discussed above for white and Negro parents, separately. In general, the Negroes participated more in the program

EXHIBIT IV-54 EFFECTS ON PARENTS - TOTAL (PERCENT)(1)

NORC Item Number					(If Yes, was it worthwhile)				Significance Difference (White vs. Negro)
			Yes	No	Very Much	All Right	Waste of Time	Don't Know	
1., 2.		As part of the Head Start Program, did you:							
	A.	Talk with any of the child's teachers?	78	21	66	11	<1	<1	*(2)
	B.	Get to know any new parents?	31	66	22	9	<1	1	*
	C.	Talk with any social workers or counselors?	23	75	18	5	-	1	
	D.	Attend any special meetings about child care?	18	79	15	3	-	1	*
	E.	Attend any special meetings about homemaking skills?	7	90	6	1	-	1	*
	F.	Attend any special meetings about housing conditions?	4	93	3	1	-	2	
	G.	Attend any special meetings about job opportunities?	3	94	2	<1	-	2	
	H.	Attend any special meetings about your personal problems?	3	93	2	1	-	2	
	I.	See any films in connection with the program?	10	87	8	2	<1	1	
	J.	Go on any group trips in the community?	15	82	12	3	-	2	*
7.		As a result of Head Start, did you (or your husband):							
	A.	Get help of any kind from any social agency?	3	94					
	B.	Get any medical or dental attention?	2	95					
	C.	Make any plans to continue your education?	8	89					*
	D.	Get a job or switch to a better job?	2	95					
8.		As a result of Head Start:							
	A.	Do you feel any more hopeful about (child's) future?	88	10					*
	B.	Did you make any new friends?	39	58					*
	C.	Did you learn anything you didn't know about raising children?	26	71					*
	D.	Do you feel that the community cares about you and your problems?	80	14					*

Note: (1) N = 2,036.

(2) Asterisk (*) indicates significance beyond the 5-percent level.

EXHIBIT IV-55 EFFECTS ON PARENTS - WHITE (PERCENT)[1]

NORC Item Number					(If yes, was it worthwhile)			
			Yes	No	Very Much	All Right	Waste of Time	Don't Know
1., 2.		As part of the Head Start Program, did you:						
	A.	Talk with any of the child's teachers?	82	18	66	15	1	<1
	B.	Get to know any new parents?	27	70	18	9	<1	<1
	C.	Talk with any social workers or counselors?	20	78	17	3	<1	-
	D.	Attend any special meetings about child care?	10	85	7	3	<1	-
	E.	Attend any special meetings about home-making skills?	2	93	1	1	-	-
	F.	Attend any special meetings about housing conditons?	1	94	1	<1	-	-
	G.	Attend any special meetings about job opportunities?	<1	95	<1	<1	<1	-
	H.	Attend any special meetings about your personal problems?	3	92	2	1	<1	-
	I.	See any films in connection with the program?	7	91	3	3	<1	-
	J.	Go on any group trips in the community?	19	76	14	5	-	1
7.		As a result of Head Start, did you (or your husband):						
	A.	Get help of any kind from any social agency?	3	93	-	-	-	-
	B.	Get any medical or dental attention?	2	94	-	-	-	-
	C.	Make any plans to continue your education?	3	93	-	-	-	-
	D.	Get a job or switch to a better job?	1	95	-	-	-	-
8.		As a result of Head Start:						
	A.	Do you feel any more hopeful about (child's) future?	81	16	-	-	-	-
	B.	Did you make any new friends?	32	65	-	-	-	-
	C.	Did you learn anything you did not know about raising children?	18	80	-	-	-	-
	D.	Do you feel that the community really cares about you and your problems?	76	17				

Note: (1) N = 832.

EXHIBIT IV-56 EFFECTS ON PARENTS - NEGRO (PERCENT)[1]

NORC Item Number					(If yes, was it worthwhile)			
			Yes	No	Very Much	All Right	Waste of Time	Don't Know
1., 2.		As part of the Head Start Program, did you:						
	A.	Talk with any of the child's teachers?	76	24	66	10	-	1
	B.	Get to know any new parents?	35	64	27	9	-	2
	C.	Talk with any social workers or counselors?	26	74	20	6	-	2
	D.	Attend any special meetings about child care?	25	74	22	3	-	2
	E.	Attend any special meetings about home-making skills?	10	88	9	2	-	3
	F.	Attend any special meetings about housing conditions?	6	92	5	2	-	3
	G.	Attend any special meetings about job opportunities?	5	93	4	1	-	3
	H.	Attend any special meetings about your personal problems?	4	95	3	1	-	3
	I.	See any films in connection with the program?	13	85	11	2	-	3
	J.	Go on any group trips in the community?	12	86	11	1	-	3
7.		As a result of Head Start, did you (or your husband):						
	A.	Get help of any kind from any social agency?	3	96	-	-	-	-
	B.	Get any medical or dental attention?	2	96	-	-	-	-
	C.	Make any plans to continue your education?	12	87	-	-	-	-
	D.	Get a job or switch to a better job?	3	95	-	-	-	-
8.		As a result of Head Start:						
	A.	Do you feel any more hopeful about (child's) future?	94	6	-	-	-	-
	B.	Did you make any new friends?	45	54	-	-	-	-
	C.	Did you learn anything you did not know about raising children?	33	65	-	-	-	-
	D.	Do you feel that the community cares about you and your problems?	84	12	-	-	-	-

Note: (1) N = 1,129.

and felt that the program was more worthwhile. The 5-percent level of significance was used to indicate those items for which there might be real differences between the two groups. As far as participation in the program is concerned, significant items indicated that the Negroes talked more with social workers and counselors and attended more special meetings on child care, homemaking skills, and job opportunities. The white parents participated more in group trips in the community. This was one of two items for which the white parents responded more affirmatively. There were three items to which the Negroes responded "more worthwhile" than the whites. These were knowing new parents, attending meetings about homemaking skills and housing conditions, and viewing films in connection with the program. The white parents indicated that the group trips in the community were more worthwhile.

Five items which show significant differences in the impact on the parents (Items 7 and 8) are making plans to continue education, feeling more hopeful about the child's future, making new friends, learning more about child-raising, and feeling that the community cares. For all five items, the Negro parents responded more affirmatively.

Opinions of the workers in the national sample concerning the extent to which parents of Head Start children were affected or changed in various ways as a result of the program are shown in Exhibit IV-57.

The question asked on the Evaluation Form was: "As a result of their contact with Operation Head Start, the parents are...." The items shown in the exhibit are the dimensions rated.

The data show that the majority of workers felt that parents had benefited in all ways more than not. The percentage of "no change" responses (and indeed of "no response") is higher in all cases for this question than for the question concerning improvement in children. It is also higher than for the same category of opinion about change in the workers themselves (see Exhibit IV-58 in subsection IV.E). This trend, along with the fact that the percentages of "much better" responses are generally lower than for the other two questions, suggests a number of possibilities. Among these are that many workers felt less able to

EXHIBIT IV-57 EFFECTS ON PARENTS - WORKERS' OPINIONS[1]

Worker's Evaluation Item Number		Percent					
		Much Better	Better	No Change	Worse	Much Worse	No Response
20(1)	Involved with child's education	36.0	50.2	6.0	0.1	0.0	7.7
(2)	Concerned about own appearance	22.0	46.4	21.4	0.0	0.1	10.1
(3)	Participating in community activities	20.1	49.0	20.4	0.1	0.1	10.3
(4)	Aware of enlightened child-rearing practices	21.5	55.4	12.8	0.0	0.1	10.2
(5)	Effective in interpersonal relations	15.6	56.7	15.3	0.0	0.1	12.3
(6)	Knowledgeable about community resources	19.3	55.9	13.9	0.0	0.1	10.8

Note: (1) N = 6,320.

comment on changes in parents or that the programs lacked sufficient parental involvement to have an effect on them. It is true, nonetheless, that the modal response for each item in Exhibit IV-58 is "better."

An examination of opinions classified by position of the workers in the CDC showed that the distributions for each item differed significantly at the .05 level. In each of the six items, the nonprofessionals expressed highly favorable opinions about effects on parents to a greater extent than did the professionals. In particular, neighborhood volunteers tended to be particularly favorable in their estimates of impacts.

The interpretation of these data raises some questions. The items imply that the respondent had substantial opportunity to observe or talk with a sizable number of parents during the course of the program. There is no way of telling to what extent such was the case. One interesting cross-check on the workers' opinions can be made by comparing them with the parents' opinions collected by NORC (see Exhibit IV-54).

Item 8C in that interview was: "As a result of Project Head Start, did you learn anything you didn't know before about raising children?" This item has some similarity to Item 20(4) in Exhibit IV-57: "As a result of their contact with Operation Head Start, the parents are aware of enlightened child-rearing practices: much better, etc." Seventy-seven percent of the sample of workers said that the parents were better or much better in this respect. In contrast, 71 percent of the parents interviewed said that they had not learned anything new about raising children. These and the above considerations make this question and the obtained data difficult to interpret unambiguously.

As a final point here, it may be reported that a number of workers did make written comments on the Evaluation Form about the ways in which parents benefited from the program. Eighty-two comments, or about 3 percent of the total comments, were to the effect that parents had been helped or benefited. However, this spontaneous response is a relatively small part of the overall percentage (76 percent) of favorable comments made about the program and its effects.

Examination of the comments appended to the Consultant's Checklists of Head Start Educational Consultants indicated that parental involvement was seen by all as a necessary ingredient to a successful Head Start program. Examples of inadequate or lacking parental participation were cited, as well as examples of active parental involvement. It should be noted that lack of parental participation was often not because of a lack of interest, but more often because of a lack of resources, feeling of mistrust, or fears of a school-like system.

One of the independent studies (Reference 2) is of special interest because it involved seven Head Start parents (four Negro, three white) in an attempt to determine the effectiveness of indigenous parents as test administrators. The parents, whose own educational level ranged from 9th to 12th grades, participated in an intensive training session to learn to administer the PPVT and the Preschool Inventory. The comparison group of testers was a group of graduate students who were sophisticated in the use of the PPVT and the PSI. The intertester (parents/graduate students) correlations were obtained from 57 children who were tested by both groups of testers and were significantly high for both tests (PPVT, r = .64, and PSI, r = .64). The implications of this study for future parent involvement were summarized by Allerhand: . . . "The effectiveness revealed by the parents in this study leads us to believe that there is a potential corps of untrained people who may be utilized for services requiring some areas of testing skill. Highly motivated individuals indigenous to the particular setting may very well provide the traits needed to negating the handicaps inherent in lack of professional training. . . It is likely that the qualities demonstrated by the parents as testers may also be utilized in other aspects of currently viewed professional services such as observers, handlers of data, and teacher-aides."

While Allerhand's project was the only one that reported such a systematic involvement of parents themselves as subjects, other independent studies commented about parents' participation.

Van Egmond (Reference 105) found that only a few of the 17 teachers included in his study implemented contact with parents. The teachers generally did not seem to recognize the important socialization role of the parents, or wish to extend their own role definition to include a "partnership" with the parents.

A report from the Southern Consumers' Education Foundation (Reference 114) commented that parent meetings held in small groups in one another's homes seemed most effective. The wide variety of topics discussed included meal planning, budgeting, and the War on Poverty itself.

A report from Warminster Township (Reference 52) mentioned a number of opportunities that were provided for parents to participate in Head Start, including classroom observation days and special meetings for fathers in addition to individual conferences.

In a report from Chicago (Reference 19) it was pointed out that often the Head Start families came from such divergent backgrounds--Appalachians, Negroes, Mexicans, Puerto Ricans, Hungarians, etc.--that parents were strangers in their own neighborhoods and welcomed, if timidly, the opportunity to get acquainted. An example of these dynamics, extracted from the report, follows:

"In one center, a Mexican woman offered to bring the refreshments to one of the afternoon meetings. She brought the makings for tacos and as she began to skillfully prepare her native dish, her neighbors gradually began to see her in a different light. She was no longer just another Mexican, but a capable, charming hostess and a mother who, like the others, shared many of the same responsibilities and problems. Barriers began to break down, recipes were exchanged, and the once quiet room was filled with attempts to communicate."

There are several instances cited in other independent studies where impacts on parents may have been implicit in participation, although the impact has not been assessed. In Chicago, all medical examinations for Head Start were done in an equipped clinic, and in the presence of at least one of the child's parents. Time was allowed for parents to ask questions and receive answers; it seems likely that these discussions had a positive effect on the Chicago parents.

In Montez' "Evaluation of Head Start Bilingual Children" (Reference 74), mention was made of a nurse who, upon sensing among parents an interest in matters relating to family planning, held a meeting for parents. There was a turnout of 80 percent for the meeting;

Porter commented that "the parents of Head Start children were made welcome in the center classrooms for the first 2 days in shortened sessions. Teachers were encouraged to confer with each set of parents, home visits were made in many cases, and evening meetings were held. . . It is patently clear from the attendance of parents at these meetings that the schools, in the case of Head Start centers, at least, were places that these families could trust and respect" (Reference 87).

There remains much more to be learned about impact on parents and the role of parent participation in Head Start programs. Some of the available data seem to raise more questions than they answer. Considering the vital role that parents play in the development of the children, it is to be hoped that more correlated data in this realm will be developed in future programs.

E. Impacts on CDC Staff Workers

In Section II we presented some of the known characteristics of the 184,000 professionals and subprofessionals, discussed how some became involved in the summer program, explored Head Start teacher styles and attitudes, and indicated some of the duties of the subprofessionals. It was suggested that not only were these people vital to the success of the program through their instruction and assistance, but that the experience contributed to increasing their understanding of the deprived child. In this section we shall discuss: (1) the impact of the children and the program on the CDC workers; (2) the effect of the innovation of using a variety of subprofessional workers; and, most important, (3) the impact of the teacher styles and attitudes on the development of the child.

Exhibit IV-58 shows ways in which the 6,320 responding staff members of over 420 Child Development Centers in the national sample felt they had benefited from their Head Start experience. The exhibit shows percentages of the workers in the sample who checked a given scale level for a given item. The question asked on the form was: "As a result of my contact with Operation Head Start, I am . . . ." The various items are listed on the exhibit.

Most of the respondents indicated that they had learned much from their Head Start experience. These findings are of interest, particularly in light of the data on their previous experience (see Exhibit II-65, subsection II. E). About 44 percent of the sample had had no previous experience with preschoolers or with children from conditions of poverty.

There were significant differences beyond the .05 level in the distributions of responses by the four main categories of workers analyzed[1] for each item shown. There were about 3,500 workers, all told, who answered these items, of which about 40 percent were professionals and 35 percent were paid neighborhood residents. On Items 21-1, -2, and -3, a larger proportion of professionals than other categories of workers indicated they had benefited much more from their Head Start

---

[1] Paid and volunteer professionals, neighborhood paid, neighborhood volunteer, and other paid and volunteer.

EXHIBIT IV-58 BENEFITS OF WORKERS' PARTICIPATION - WORKERS' RATINGS(1)

	Worker's Evaluation Item Number	Percent				
		Much More	Somewhat	A Little	Not At All	No Response
21(1)	Knowledgeable about teaching pre-school children	60.5	26.1	5.2	1.4	6.8
(2)	Aware of environment that Head Start children experience	60.4	28.1	4.7	.8	6.0
(3)	Acquired new techniques for dealing effectively with these children	48.0	34.3	7.8	1.6	8.3
(4)	Ability to deal with other professional workers concerned with child's development	43.1	37.2	9.7	2.2	7.8

Note: (1) N = 6,320.

experience. On Items 21-3 and -4, somewhat disproportionate numbers of paid neighborhood residents felt they benefited little or not at all. However, the great majority did indicate they thought they had gained substantially. In written comments on the evaluation form, many volunteers and aides stated that their experience had helped them to decide upon a career in teaching, social work, etc.

These positive expressions are generally supported by several independent research studies. In Greene County, Ohio, Cohnstaedt (Reference 21) stated that two-thirds of the interviewed Head Start teachers reported significant attitudinal changes which they attributed to Head Start. These included a better understanding of the child's needs as an individual, a greater sense of the importance of creative self-expression, and a greater ability to relate to the "whole child."

Miller and Cassileth (Reference 73) asked both the subprofessionals and the teachers in their 30 sample centers to determine the effect of the program on the subprofessionals. When asked about the benefit of Head Start to these aides, the plurality of teacher and subprofessional response suggested a gain of understanding and insight into children.[1] Eleven subprofessionals and ten teachers believed that the aides were better able to work with children. Ten subprofessionals and sixteen teachers cited self-accomplishment, improvement, and gratification. More teachers than aides thought that the latter had a better understanding of educational processes; more aides than teachers saw the former as benefiting through a new insight into deprivation. Increased self-confidence was mentioned by 13 teachers, but by only one of the subprofessionals.

When asked the ways in which the subprofessionals enjoyed the work, the majority of both groups stressed enjoyment of the children. An equal number of teachers and subprofessionals (21 each) suggested that the latter enjoyed the personal gratification from their own activities.

---

[1] In this subsection, response frequencies are presented. Eighty-six subprofessionals and forty-three teachers were interviewed; the latter commented on two subprofessionals each. Therefore, it is assumed that the frequencies represent effective responses from 86 teachers.

Both groups were asked whether the work changed the subprofessionals in any way. Twenty-four subprofessionals and sixteen teachers reported no change. Both groups also stressed that the subprofessionals were better with and had a greater understanding of children. In self-evaluation, the aides then emphasized more sympathy with and understanding of poverty problems and a broadened outlook and experience toward children. The teachers stressed that the aides had changed in self-confidence and self-respect.

As a final bit of evidence about the impact of Project Head Start on staff members, percentages of responses to questions of satisfaction with the experience and anticipations of future participation are presented in Exhibit IV-59. The distributions speak for themselves. Furthermore, it is noteworthy that these were the only two questions on the evaluation form in which the distributions of responses by position of worker in the CDC were not significantly different ($p > .40$ in each case).

This expression of enthusiasm, made at the end of the program, can be considered in conjunction with the attitudes expressed by a sample of Texas teachers (reported by Pierce-Jones, et al., see subsection II. E). Expectations were high at the start of the program; judging from the data in Exhibit IV-59, the enthusiasm did not diminish.

It was the general, although not unanimous, view of the program participants and observers that the use of subprofessional personnel contributed to the success of the program. The usual criticisms were that the authority and duties between teacher and aide were not always clearly delineated, and this created some confusion. A few teachers did not enjoy having another person, even an aide, in the classroom. A very few comments speak to the abnormal circumstances of an aide in the classroom--unlike the situation the child is to find in his regular school class.

Available studies, however, suggest that the overwhelming majority of participants and observers were positive. Miller and Cassileth asked the subprofessionals and the teachers the extent to which the aide

EXHIBIT IV-59 WORKER ENTHUSIASM - WORKERS' OPINION (1)

		Percent				
	Worker's Evaluation Item Number	A Great Deal	Somewhat	A Little	Not At All	No Response
22.	Enjoyed duties	90.0	5.4	.5	.1	4.0
23.	Look forward to participating next year	83.1	9.8	1.7	1.1	4.3

Note: (1) N = 6,320.

was of assistance.[1] Seventy percent of the subprofessionals and eighty-one percent of the teachers indicated that the aides had helped the children either extremely or very much. No one from either group said that the children were not helped at all by the aide. Two-thirds of the aides and almost 80 percent of the teachers said that the former had helped the teacher either extremely or very much. Only one teacher mentioned that one aide was no help at all.

In measuring overall effectiveness, the great majority of both groups were very positive towards the subprofessionals' role. The two groups stated that the most effective areas were in educational play, supervisory (children), and affect-relational activities. Many workers considered themselves to be very effective in social shaping (discipline), but few teachers agreed. The authors stated: "Subprofessionals considered themselves to be least effective in the area of clerical work and testing,[2] and as community resource persons; teachers felt subprofessionals to be least effective in the roles of disciplinarian and information giver, and in work with individual children."

Looking to future programs, the workers in the sample were asked how the program might make even better use of the subprofessionals. Both the subprofessionals and teachers stressed increased orientation or special training. Finally, both groups thought that the subprofessional should be hired again.

One independent study, conducted for the Center for Urban Education in New York (Reference 69), focused on the use of 10 teen-aged aides in a program in one of New York's most depressed neighborhoods. It appears that an objective of the program was to train high school graduates as preschool teachers' assistants. Because it was believed that the children needed to relate to adult males, it was hoped to employ males in this capacity.

---

[1] A 5-point scale (Not at All, A Little, Moderately, Very Much, Extremely).

[2] According to the authors, such tasks were in fact rarely performed by these 86 workers.

The investigators reported, however, that the anticipated success was not achieved. They state:

> Observation of the teacher's assistants' activities did not reveal evidence of their having benefited from the two week intensive training program designed to fit them for their work as teachers' aides. Their role in the program was largely confined to "mopping up" operations and offering general custodial care to the children. Moreover, all but one of the trainees were girls, although several young men had been engaged as assistants at the outset of the program. Only one boy remained and he was surrounded by female teachers and female assistants. He had no one with whom to identify.
>
> It seemed evident from the way in which all the boys crowded around the older brothers of some of the children, that they were willing and even anxious to have male supervision. The absence of male assistants was a serious shortcoming of this program.
>
> As for the teachers themselves, they seemed competent. They had a planned teaching program which they attempted to follow faithfully. They appeared to guard their role as educators jealously and were hesitant to share the responsibility of teaching with the teenage assistants.
>
> While the program appeared to be good for the children, the trainees received only moderate stimulus. The program failed to clarify the role of the assistant; to make it more responsible educationally, and to foster a spirit of team work between teacher and trainee. These obstacles can and must be overcome before teenage assistants can participate effectively in pre-school programs throughout the city.

While this study was of but one aspect of one program and may or may not represent situations experienced in other projects, it does suggest some of the problems to be faced in fully utilizing the teenage volunteer.

Even with the problems raised, it would appear that the subprofessional worker has become an integral part of the Head Start program. While his duties and responsibilities have varied from center to center, his mere presence has encouraged a concentration on the individual child. As indicated in the 86-worker sample, he has been of great assistance to the children, to the teachers, and, as importantly, to himself. Perhaps the greatest tribute to his effectiveness, however, would be the consideration of the inclusion of this Head Start concept in the traditional educational structure.

There seems little doubt that teacher attitudes and styles affect the learning progress of the child. However, the exact nature and extent of this influence is not clear.[1] It is an important issue for Head Start, for if different teaching styles and attitudes do significantly affect the child's development, there may be important program implications in teacher training and recruitment.

At least two independent research studies have attempted to relate the teacher to the child. As the investigators indicate, their results should not be interpreted as conclusive. However, they do serve to illustrate the important areas of future research.

Eisenberg (Reference 33) is currently evaluating data concerning teacher behavior and attitudes in relation to changes in the children. Progress reports have been submitted; because the final report has not been completed, his results must be regarded as tentative. In his study, Eisenberg investigated several teacher characteristics. Thirty-eight teachers were rated on warmth, restrictiveness, activity, and a variety of other behaviors. Each teacher also completed the Minnesota Teacher Attitude Inventory (MTAI). Teachers were ranked and grouped on each of the variables. Analyses of variance were performed on three sets of PPVT change scores for 15 children in each teacher's charge to discover if each teacher characteristic affected an IQ change.

Eisenberg reports the following results: "...(1) teachers with a moderate degree of 'communicative acts' produced significantly more improvement in IQ during the Head Start period. (2) Teachers with a moderate degree of 'management' produced significantly more improvement in IQ during the Head Start period. (3) Teachers who were viewed as warm, active, varied, and permissive produced significantly more IQ change during the entire study. (4) There is no significant effect of

---

[1] See, for example, reviews of the literature by Getzels and Jackson (Reference 39) and Withall and Lewis (Reference 109).

'encouragement' on IQ. (5) There is no significant relationship between teacher attitudes on the MTAI and IQ changes. (6) Teachers who engage in 'intellectual' behaviors produced significantly more positive IQ changes."

While Eisenberg looked at change as illustrated by the IQ, Lamb (Reference 68) studied "The Development of Self-Other Relationships During Project Head Start." In focusing on the teachers,[1] Lamb asked two questions: (1) Would the teachers' cognitive styles affect the development of self-social contructs? and (2) Would the teachers' perceptions of Head Start children affect the development of self-social constructs?

To answer these questions, Lamb concentrated on the state of Delaware: 28 CDC's, 92 teachers, and 1,400 children. Almost 800 of these children were tested using the Self-Social Symbols Task instrument and a sharing task instrument. Eighty-four of the teachers were available for analysis.

In order to classify the teachers according to certain attitudes and styles, a series of tests was used. One, an Essay Problem Test developed by Lamb, was given to determine the conceptual style or level of teachers. The subjects were asked to discuss the topic "Rules" according to guidelines which increased in conceptual complexity. Second, to measure self-complexity teachers were asked to select from a list of 90 those adjectives which best described them. Teachers were then given a test to measure their perception of disliked students. Finally, the Head Start Workers Attitude Scale was given before and after training and several times during the operation to measure teacher attitude towards the poor. The teachers, once classified, were compared with the development of their students.

Lamb found that in general, "...students of abstract and complex teachers gained in self-esteem, identified more closely with mother, developed a more balanced power perception of teacher and police figures and perceived themselves as [more] similar to others" than did students of concrete and less complex teachers. Lamb hypothesizes that one of the reasons for this result may be that the abstract and complex teachers are better able to provide a variety of environmental alternatives,"... thus generating greater behavioral freedom to explore self and self-other relationships."

---

[1] He also looked at self-other relationships of Head Start and non-Head Start children. This is discussed in subsection IV.C.

The effect of teachers' perceptions (e.g., perception of a disliked person and general attitude toward the poor) produced some interesting results. Lamb found that teachers' perceptions had the most effect on Negro male students and little or no effect on female white students. Lamb states:

> Male Negro students of teachers who are relatively less positive in their attitudes about the poor and in their perceptions of disliked students identify less closely with their teachers, feel more assertive with respect to authority figures and are lower in their self-esteem. The converse holds for male Negro students with relatively more positive teachers. There is a tendency for males in general to be affected by teacher attitude. Self-esteem, balance of power, and self centrality increase for males under positive teachers while decreases are found for males under less positive teachers. This suggests that those students typically distant from the institutional concurrent norm are more sensitive to teacher attitude with a defense of self-social constructs. Those students typically within the norm are more secure and open to change under a wide variety of attitudinal pressures.

The investigator concludes, then, that the responses to both his questions are affirmative: teachers' cognitive styles and teachers' perceptions of Head Start children do affect the development of self-social constructs.

It is important, of course, to put the results of the Eisenberg and Lamb studies in perspective. It has been suggested throughout this report that many factors came to play in the Head Start child's development. These include the child's environment, his family situation, his physical and mental health, a number of program variables, and worker attitudes and styles. When some of these factors were related to the child's development during the 8-week summer period, some significant differences emerged.

Behind the various results that have been reported throughout this and other sections, there is the wealth of data that was obtained during the Summer 1965 Project Head Start. These data, admittedly shaky in some cases, nonetheless are of great importance. No one can rightfully say that all implications and potentials have been exploited in them. They provide, collectively, a major body of information of extraordinary scope. Much was accomplished in Project Head Start; of equal importance in the long run, much was learned.

V. SUMMARY AND RECOMMENDATIONS

This concluding section summarizes the current information on the Summer 1965 Project Head Start. It is to be emphasized that the observations made here are based on the available information which has been analyzed.

The summary is organized into six key elements of Head Start: the magnitude of the project; the communities served; the people involved; the program emphasis; community, parent, and worker reactions; and perhaps most important, the impact on the child.

We finally provide a set of recommendations for future planning, programs, and research. These recommendations are, in some cases, based on a best judgment from a detailed examination of the data; they are not necessarily the outcomes of arguments developed in the text.

A. Summary

1. Project Magnitude

a. Early Projections

(1) 100,000 culturally disadvantaged children

(2) 200 communities across the nation

(3) 12,000 teachers

b. Results

(1) 560,000 children in 50 states, District of Columbia, Puerto Rico, Virgin Islands, Guam, and American Samoa were served:

- 12 percent from Northeast
- 20 percent from Middle Atlantic
- 20 percent from Southeast
- 15 percent from Midwest
- 16 percent from Southwest
- 6 percent from West
- 7 percent from Far West
- 3 percent from Territories

(2) 184,000 workers participated:

- 22 percent professionals (child/professional ratio: 13/1)
- 47 percent professionals and nonprofessionals
- 53 percent volunteers

(3) 47 percent of country's 3,142 counties were served by one or more Head Start Programs:

- 71 percent of counties in Northeast
- 66 percent of counties in Middle Atlantic
- 57 percent of counties in Southeast
- 38 percent of counties in Midwest
- 51 percent of counties in Southwest
- 27 percent of counties in West
- 51 percent of counties in Far West

(4) 67 percent of nation's special-target counties (300 with the lowest per capita income) were served by one or more Head Start Programs; 9 percent of Head Start children came from these counties.

(5) Total cost was $94.6 million ($168 per child).

- $82.7 million Federal share
- $11.9 million local share
- 13 percent local share/total cost

2. Communities Served

a. Early Plans

(1) Head Start should concentrate more heavily in communities with a large percentage of low income families.

(2) Special effort would be made to include special-target counties.

b. Results

(1) Per population size, there was greater percentage participation of children from three lowest family income regions (Southeast, Southwest, Middle Atlantic).

(2) There was less relative concentration in fourth lowest family income region (West).

(3) The least concentration was in the highest family income region (Far West).

(4) Per population size, there was greater percentage participation of children from special-target counties than from other counties with programs.

(5) Comparing special-target counties with programs to those without programs, little or no significant differences were apparent. Those with programs had a slightly higher percentage of low income

families; those without programs tended to have larger nonwhite populations.

3. People Involved

a. Children

(1) Expectations

(a) Children would come from economically and culturally deprived families (85 percent with incomes under $3,000 per year).

(b) The children would have high rates of undetected medical disorders.

(c) The children would be behind other children of their age in cognitive, social, and emotional development.

(2) Results

(a) Description

Age:	About 13 percent were 4 years old or younger; 42 percent were 5 years old; about 39 percent were 6 or more (estimated average age: 5 years, 10 mos.).
Sex:	Slightly more boys than girls participated.
Race:	About equal percentages of white and Negro children were served.
Lingual subgroups:	Different groups represented included Puerto Rican and Mexican American, French, Indian, and Eskimo.

(b) Family Background

Family structure:	At least 68 percent of the children lived with both mother and father.
Household size:	Nearly 60 percent of the children came from households with six or more people.
Income:	About 38 percent probably came from families with income of $3,000 per year or less. When the family income poverty level is measured in relation to household size, almost 50 percent of the families earned less than the poverty line.
Employment status of mother:	Less than half worked outside the home.
Educational level of mother and father:	Less than half finished high school.
Father's occupation:	Over 30 percent reported as laborers.

(c) Socio-Cultural Environment

A national sample of parents of Head Start children was interviewed. Some findings about the children of these parents were:

- 35 percent had no pets.
- 40 percent had no toys or games.
- 48 percent had no books or magazines.
- 43 percent had no crayons, paints, or paper.

Differences were found between white and Negro children with respect to habits, activities, and possessions.

(d) Health

Many medical and dental evaluations were completed, and health statistics were compiled. Findings of interest included:

- Nearly 15 percent of children were not born in a hospital.
- Over 75 percent reported general health as good.
- In some outstanding medical programs, the incidence of some disorders was higher than in the national sample.

(e) Cognitive Functioning and Social/Emotional Development

Studies uniformly showed Head Start children scored lower on tests of cognitive functioning and general mental ability than the norms for the tests would predict.

In national pretests of cognitive ability, results were that:

- Males scored higher than females.
- Negroes scored lower than whites.
- Urban children scored lower than rural farm and nonfarm children.
- No differences in standing were found with respect to the educational level of the mother, household size, or whether or not the mother was employed.
- Scores tended to increase with increasing family income levels.

Studies using both PPVT and Stanford-Binet (S-B) tests consistently found higher IQ's when measured by the S-B. This disparity suggests the culturally disadvantaged children tested had poorly developed verbal ability.

(f) Social and Emotional Development

Very few children with severe psychological disturbances reported. Among those with such disturbances, the following symptoms were most frequently noted:

- Restlessness
- Anxiety
- Selfishness

No major differences among races were observed.

b. Staff and Workers

(1) Expectations

(a) A wide variety of specialists and non-specialists would be involved.

(b) Both paid and volunteer personnel would be used.

(2) Results

(a) Staff structures included teachers, social workers, nurses, psychologists, physicians, dentists, housewives, Neighborhood Youth Corps and other youngsters, and parents of participating children.

(b) Over 30 percent of the workers had had no previous experience with preschoolers or with children from disadvantaged neighborhoods.

(c) Workers of many ethnic and cultural backgrounds participated.

(d) Ages of staff members and workers ranged from under 14 to over 60.

(e) Staff workers were predominantly women.

(f) There was a large volunteer turnout.

4. Program Emphasis

a. Expectations

(1) Medical/dental evaluations for each child and treatment as required would be provided through the CDC.

(2) Daily programs consistent with modern concepts of early childhood development would be provided.

(3) Social services would be available.

(4) Programs for parental involvement would be established.

b. Results

(1) Data from educational consultants indicates that 88 percent of the CDC's visited had arranged for medical examinations and 85 percent for dental examinations.

(2) NORC interview data shows that 84 percent of the respondents indicated their children received a medical examination as part of Head Start and 69 percent received a dental examination. Parents felt that these examinations were worthwhile in 70 percent and 59 percent of the cases, respectively.

(3) Public health or welfare agencies were providing some assistance to over 80 percent of the projects visited by educational consultants.

(4) Some services in the medical/dental field were provided by medical and dental societies in about 43 percent of the programs visited by the educational consultants.

(5) Seventy-eight percent of the workers expressed the opinion that the availability of medical/dental services was good or very good.

(6) Workers were generally enthusiastic about the daily program content. In over 90 percent of the cases, they reported that morale of the staff was good or very good, and in over 85 percent that relevance of the curriculum to the child was good or very good.

(7) Educational consultants were less enthusiastic about the content of the daily programs of some centers visited. The occurrence of highly structured programs (about 16 percent of those observed) was criticized by these consultants.

(8) Parent participation was a weak element in CDC programming as reported by educational consultants. In only about 30 percent of the cases had some parents' suggestions been adopted, and in less than 25 percent of the cases were parents active in planning follow-on activities.

(9) Considerable enthusiasm was reported by many teachers and administrators about the training program provided and the use of teachers' aides. to implement more effective classroom activities.

A majority of workers sampled believed that:

(a) The daily schedules were realistic.

(b) Cooperation from the parents was good or very good; however, about 15 percent thought it was fair or poor.

(c) The amount and quality of play material were good or very good; however, over 10 percent thought they were only poor or fair.

(d) The research instruments were good or very helpful; however, over 14 percent thought they were only poor or fair.

(e) Children benefited greatly from the programs.

Many complaints or suggestions were offered concerning:

- Training and selection of teachers' aides.
- Too much testing and paperwork.
- Problems in organization, planning, and administration.
- The need for more participation of parents and/or communications between parents and teachers.

5. Community, Parent, Worker Impacts

a. Community

(1) Expectations

(a) Many elements of the community would contribute the necessary resources to the centers.

(b) As a result of Head Start the community would see the need to establish on-going programs.

(2) Results

The educational consultants' observations reveal:

(a) School systems, boards of education, individual schools, etc., sponsored the majority of programs. While many community organizations, including community-action agencies, were project grantees, few of them sponsored programs.

(b) Some sponsors received extensive assistance; others did not. Consultants' observations were that after the public schools, the public health and welfare agencies provided the most assistance.

(c) In over 90 percent of the projects, arrangements had been made to transmit the Head Start records to the school system.

b. Parents

(1) Expectations

(a) The parents would participate extensively in the Head Start programs.

(b) The parents would have a new awareness of community concern for their problems.

(2) Results

(a) The degree of parent participation varied greatly from center to center.

(b) 88 percent of the parents in the NORC survey reported they were more hopeful about their child's future.

(c) 80 percent reported that as a result of Head Start they felt the community cared about them and their problems.

(d) 78 percent became acquainted with their child's teacher.

(e) 31 percent became acquainted with other parents.

(f) 26 percent said they learned something new about raising children.

(g) 23 percent talked with a social worker or counselor.

(h) In general, Negroes participated more in the program and considered it more worthwhile.

c. Staff and Workers

(1) Expectations

(a) There would be increased experience with preschool children and children from disadvantaged areas.

(b) There would be increased opportunity to learn new concepts and techniques of child development and education, and to gain interdisciplinary experience.

(c) The program would be effective.

(2) Results

(a) Over 70 percent of the sample of workers believed they had benefited in each case by (1) becoming more aware of the nature of the environment of culturally deprived children, and of the ways of preschoolers, (2) acquiring new concepts and skills, and (3) gaining increased ability to work with other professional specialists concerned with child development.

(b) Over 80 percent would be interested in participating again.

6. Impact on Children

a. Expectations

(1) There would be referral and treatment of medical and dental problems.

(2) Improvement in cognitive functioning and social and emotional adjustment would be realized.

b. Results

(1) While referral rates were generally low, there have been reported referrals for vision, dental, speech, and hearing problems, among others. In some individual local programs, as high as 40 percent health referrals for the population handled were reported. However, data suggest that there was inadequate provision for follow-up in many programs.

(2) There were substantial variations in the adequacy of the medical evaluations from program to program. The relationship of program characteristic or quality to impact on child's health is clear.

(3) Studies almost unanimously found positive and statistically significant differences in PPVT mean raw scores between pretests and posttests.

(4) Mean raw score gains were generally on the order of 4 to 6 points on the PPVT.

(5) Studies using various tests comparing Head Start with comparable non-Head Start children at the end of the summer usually found that the groups were not significantly different. However, the results are not conclusive.

(6) At the end of the summer, tests of Head Start children versus non-Head Start children who were not culturally deprived suggested that, while the Head Start children made significant gains, they still performed less well than the non-disadvantaged groups.

(7) There is some evidence that non-Head Start children with socio-economic characteristics similar to the Head Start population caught up in performance on certain tests after 2 to 3 months of attendance in school. However, the available follow-up test results comparing Head Start and non-Head Start children in school are limited and based on only a small sample of children. In effect, reliable evaluation of long-term effects of Head Start cannot be made at this time.

(8) Some results found in the 1-percent nationwide sample of PPVT scores were: (a) no differential effects of Head Start related to factors such as race, sex, region, family structure, level of mother's education, employment of mother, and urbanization were found; and (b) there was an indication that younger children (i.e., under 5) may have benefited less than expected in terms of the PPVT.

(9) Effects or gains observed in different studies depended in part on the tests employed. For

example, one study found a measure of rate of learning to be more sensitive than other tests of cognitive ability. While there is little reason to doubt that significant changes occurred in large numbers of Head Start children, the changes are apparently complex, and variables affecting changes were identified only very grossly in the 1965 Project Head Start. No findings to date indicate a reliable relationship between improvement and programmatic variables.

(10) A majority of parents and workers surveyed on a national basis rated the Head Start children as having improved in self-confidence, ability to do things on their own, ability to talk, and in everyday manners.

(11) In one study, a relationship between teacher variables and pupil behavior was observed. The effect varied with the sex and race of the pupils.

B. Recommendations

Finally, we shall present some recommendations for future programs and research. We have throughout the text drawn attention to implications of findings in both of these areas. These recommendations, which are by no means the only ones possible, arise from two types of problems--those encountered in the actual process of analyzing the data, and those suggested by the analyzed data, either directly or upon consideration. We have not assigned priorities to the recommendations, nor will we attempt to discuss each in detail.

Problem 1

Although one of the Head Start objectives was to provide adequate medical and dental examinations for every participant, with follow-up treatment as desired, there were in fact wide variations in the quality of the programs.

Recommendations

1. There is a need to establish procedures for following up on individual case findings.

2. There is a need for a continuing effort to collect and report reliable prevalence data, since these are necessary for guiding future plans and programs; they are inputs to determining requirements for personnel, facilities, etc. Special attention should be directed towards assuring that examinations of all groups (e.g., white and Negro) are of equal quality.

3. There is a need to define strictly the disorders to be looked for (e.g., vision defects, anemia), and to establish criteria for the reporting of disorder prevalence in order that recommendation No. 2 may have the greatest possible effect on future plans and programs.

4. There is a need to recognize that there are variations among regions and communities in the prevalence of certain disorders and in the cost and availability of medical resources.

5. Because of the need presented in No. 4 above, there is a need for OEO to prepare more specific guidelines defining the types of examinations and services which should or can be provided. These guidelines

should suggest means for developing medical programs in accordance with screening examination and follow-up priorities which take into account (a) the local prevalance of certain disorders, (b) the cost and availability of medical resources, and (c) the medical services a child will receive when he enters the public school system.

6. There appear to have been shortages in personnel to carry out certain facets of the examinations, such as screening tests for vision and hearing problems. Either more effort is required in program planning and implementation to obtain and use such personnel, or, if they are really not available, a concerted effort must be made to find, train, and use them.

Problem 2

There were numerous sources of error in obtaining and collecting the national assessment data.

Recommendations

In future evaluations, primary attention should be paid to quality rather than quantity of data to be collected; specifically:

- Special provision needs to be made to assure that data can be cross-correlated; that is, all data relevant to a child in a sample should at least include that child's identification number or CDC class number, as appropriate.
- All forms used should be reevaluated and redesigned to increase their ability to produce usable and interpretable data in satisfying the information requirements of the 1966 program.
- Consideration should be given to having certain aspects of the testing and data collection carried out by persons not involved in the operation of the CDC's; in any event, all data collected should be directed, monitored, and/or supervised by persons not directly involved in the operation of the Head Start programs.

Problem 3

There were many difficulties in comparing the results of independent research studies.

Recommendations

1. Certain baseline data describing the samples should be reported in uniform terms, as age in months, numbers of boys and girls, level of economic deprivation, ethnic characteristics, etc.

2. Test results should be scored and reported in some uniform way (such as raw score), in addition to whatever way the reporter chooses to present his scores (e. g. , in terms of IQ or mental age).

3. Intervals between pretests and posttests should be uniform, or, where this is not possible, should at least be clearly stated.

4. Careful descriptions of control groups should be reported, including how they were obtained.

Problem 4

There is evidence that many children, unquestionably eligible for Head Start, did not participate. In some cases, this appeared to be due to inadequate recruiting procedures.

Recommendation

More emphasis is needed in planning and implementing the recruiting phase of the program, so that more of the target population is served.

Problem 5

There is no way of assessing the long-range effects of Head Start without carefully planned and implemented follow-up studies.

Recommendation

At least as much effort should be put into longitudinal studies as into short-term assessment and evaluation.

Problem 6

It was not possible with available data to determine those factors in the programs that were related to improvements in the children.

Recommendations

1. More attention must be given to defining reliably observable characteristics or variables of programs.
2. Pilot-testing of rating scales and questionnaires should be undertaken where possible.

Problem 7

A number of findings were provocative and warrant further research emphasis.

Recommendations

1. The finding that Head Start boys apparently performed significantly higher than girls on the PPVT is contrary to findings reported elsewhere and warrants further investigation.
2. The finding that there appeared to be no differential sensitivity, in terms of PPVT gain, associated with any of the stated single classifications of children (with the exception of age and possibly family income), or with CDC's warrants further investigation.
3. The finding in the independent studies that IQ scores obtained from the Stanford-Binet were consistently higher than IQ scores obtained from the same children on the PPVT is contrary to results of studies reported elsewhere, and warrants further investigation.
4. The finding of an apparent differential effect of the program associated with age seems particularly important in view of its implications for program planning and practices, and warrants further investigation.
5. The finding that different measures appeared to give different indications of level of performance and improvement deserves much more attention.

Problem 8

It was difficult to identify comparable cost elements between programs.

Recommendation

There is a need for clarification of cost elements and standardization of reporting procedures to permit analyses of relationships of cost to program effectiveness.

LIST OF REFERENCES

1. Abrams, Irving, and Ralph Spaeth, Chicago's Head Start Program, Summer of 1965. (Final unpublished non-OEO-funded Head Start study. For further information, contact Dr. Irving Abrams, or Dr. Ralph Spaeth, Board of Education, 228 North LaSalle Street, Chicago, Illinois 60601.)

2. Allerhand, Melvin E., Head Start Operational Field Analysis, Progress Reports No. 1 and 2. (Unpublished Head Start Study, OEO Contract No. 512. For further information, contact Dr. M. E. Allerhand, Department of Psychology, Western Reserve University, Cleveland, Ohio 44106.)

3. Ausubel, D., and Pearl Ausubel, "Ego Development Among Segregated Negro Children," in A. H. Passow (ed.), Education in Depressed Areas. New York: Teachers College Press, 1963.

4. Baldwin, I. T., and Joan C. Lee, An Evaluation of the Knox County, Kentucky Project Head Start, August 1965. (Non-OEO-funded Head Start study. For further information, contact Mr. I. T. Baldwin or Dr. Joan C. Lee, Psychological Associates, Ltd., 115 East Maxwell Street, Lexington, Kentucky.)

5. Berger, Stanley I., Development of Appropriate Evaluation Techniques for Screening Children in a Head Start Program -- A Pilot Project. (Unpublished Head Start study, OEO Contract No. 515. For further information, contact Dr. Stanley I. Berger, Department of Psychology, University of Rhode Island, Kingston, Rhode Island 02852.)

6. Berlin, Irving N., Report of King County, Washington Regional Research Project. (Unpublished Head Start study, OEO Contract No. 532. For further information, contact Dr. Irving Berlin, Division of Child Psychiatry, University of Washington, Seattle, Washington 98105.)

7. Bloom, B. S., "Testing Cognitive Ability and Achievement," Chapter 8 in N. L. Gage (ed.), Handbook of Research on Teaching. Chicago: Rand McNally and Co., 1963.

8. Bonney, Merl E. and Ertie Lou Nicholson, "Comparative Social Adjustments of Elementary School Pupils With and Without Preschool Training," Child Development, March 1958, Vol. 29, pp. 125-133.

9. Boston Project Head Start, (Local Head Start study, non-OEO-funded.)

10. Boyer, Donald N., Evaluation of Project Head Start, Summer, 1965 -- A Report to the Board of Education, San Diego City Schools, November 1965. (Final Head Start study, non-OEO-funded. For further information, contact San Diego City Schools, Park and El Cajon Boulevards, San Diego, California.)

11. Bruner, Jerome, "Education as Social Invention," Saturday Review of Literature, February 19, 1966.

12. Bruner, Jerome, "The Cognitive Consequences of Early Sensory Deprivation," in Philip Solomon (ed.), Sensory Deprivation. Cambridge: Harvard University Press, 1961, pp. 195-207.

13. Caldwell, Bettye, and Donald Soule, The Preschool Inventory. (Unpublished Head Start study, OEO Contract No. 514. For further information, contact Dr. Bettye Caldwell, Department of Pediatrics, State University of New York, Syracuse, New York 13210.)

14. Cambridge Health Department Report on Head Start. (Final non-OEO-funded study. For further information, contact Dr. Clara Waldinger, Department of Public Health, Cambridge, Massachusetts 02139.)

15. Campbell, D. T., and J. C. Stanley, "Experimental and Quasi-Experimental Designs for Research on Teaching," Chapter 5 in N. L. Gage (ed.), Handbook of Research on Teaching. Chicago: Rand McNally and Co., 1963.

16. Chandler, Marvin, Community Depth Study of 3rd and 7th Wards and its Effects on Head Start Children. (Unpublished Head Start study, OEO Contract No. 536. For further information, contact Rev. Marvin Chandler, Council of Churches of Rochester, 130 Main Street East, Rochester, New York, 14604.)

17. Chesapeake Public Schools, Growth of Pupils in Project Head Start as Measured by the Metropolitan Readiness Test, November 1965. (Non-OEO-funded Head Start study. For further information, contact Department of Research, Guidance and Testing, Cheapeake Public Schools, Chesapeake, Virginia.)

18. Chesteen, Hilliard, Robert A. Perkins, Edwin O. Timmons, Jack B. Parker, and William P. Addison, M. D., The Effectiveness of the Head Start Program in Enhancing School Readiness in Different Cultural-Socio-Economic Groups. (Unpublished Head Start study, OEO Contract No. 570. For further information, contact Dr. Hilliard Chesteen, Jr., School of Social Welfare, Louisiana State University, Baton Rouge, Louisiana 70803.)

19. Chicago Committee on Urban Opportunity -- Project Head Start. (Private, non-OEO-funded Head Start study.)

20. Church, Joseph, *Language and the Discovery of Reality*. New York: Random House, 1961.

21. Cohnstaedt, Martin, and Peter H. Irons, *A Study of Operation Head Start -- Greene County, Ohio*. (Unpublished Head Start study, OEO Contract No. 572. For further information, contact Dr. Martin L. Cohnstaedt, Sociology Department, Antioch College, Yellow Springs, Ohio 45387.)

22. Colon, Manuel, *Sociological Study of Head Start Children of a Public Housing Project in the Virgin Isles*. (Unpublished Head Start study, OEO Contract No. 523. For further information, contact Mr. Manuel Colon, L. C. 19, Caparra Terrace, San Juan, Puerto Rico.)

23. *County and City Data Book.* Bureau of the Census, 1962.

24. Cronbach, L. J., *Essentials of Psychological Testing*. New York: Harper and Row, 1960.

25. Curwood, Sarah, *A Survey and Evaluation of Project Head Start as Established and Operated in Communities of the Commonwealth of Massachusetts During the Summer of 1965*. (Unpublished Head Start Study, OEO Contract No. 551.) For further information, contact Dr. Sarah Curwood, Massachusetts Committee on Children and Youth, 9 Newberry Street, Boston, Massachusetts, 02159.)

26. Davis, Allison, "Society, the School, and the Culturally Deprived Student," in *Improving English Skills of Culturally Different Youth*. U. S. Department of Health, Education and Welfare, OE Bulletin No. OE-30012, 1964, pp. 10-21.

27. Deutsch, Martin, "The Disadvantaged Child and the Learning Process," in A. H. Passow (ed.), *Education in Depressed Areas.* New York: Teachers College Press, 1963.

28. Deutsch, M. and Bert Brown, "Social Influences in Negro-White Intelligence Differences," *Journal of Social Issues*, April 1964, Vol. 20, pp. 24-35.

29. Doi, Edith, *Hawaii Head Start Project*. (Final non-OEO-funded study.)

30. Dunn, Lloyd, *Expanded Manual, Peabody Picture Vocabulary Test.* Minneapolis: American Guidance Services, 1965.

31. Edwards, Thomas J., *Program Proposal for Culturally Disadvantaged Preschool Children.* Chicago: Science Research Associates, 1965.

32. Edwards, Thomas J., "The Language-Experience Attack on Cultural Deprivation," *The Reading Teacher*, Vol. 18, No. 7 (1965), pp. 546-551.

33. Eisenberg, Leon, A. Change in Verbal Intelligence as Measured by the Peabody Picture Vocabulary Test; B. Teacher Behavior and Attitudes in Relation to Changes in the Children; C. The Effects of Tutoring on Perceptual and Conceptual Skills; D. The Effect of Special Perceptual Training on the Peabody Picture Vocabulary Test, the Columbia Mental Maturity Scale and a New Test, the Johns Hopkins Perceptual Task; E. Clinical Testing of Head Start Children; F. Language Function in a Sample of Head Start Children. (Substudies from unpublished Head Start Study, OEO Contract No. 510. For further information, contact Dr. Leon Eisenberg, Children's Psychiatric Service, The Johns Hopkins Hospital, Baltimore, Maryland 21205.)

34. Fishman, Robert, A Demonstration Project in the Development of Rural Child Care and Project Hope. (Final and preliminary reports, respectively, OEO Contract No. 437-1D. For further information, contact Dr. Robert Fishman, Director of Research, Department of Child Welfare, Frankfort, Kentucky 40601.)

35. Foley, Walter, Quarterly Progress Report on Follow-Up of Head Start Participants in the State of Iowa, No. 1, September 1965; No. 2, January 1966. (Unpublished Head Start study, OEO Contract No. 522. For further information, contact Dr. Walter Foley, Educational Information Center, University of Iowa, Ames, Iowa 50012.)

36. Frazier, Alexander, "A Research Proposal to Develop the Language Skills of Children with Poor Backgrounds," in Improving English Skills of Culturally Different Youth. U.S. Department of Health, Education and Welfare, OE Bulletin No. OE-30012, 1964, pp. 69-79.

37. Friedlander, George, A Study of the Articulatory and Intelligibility Status of Socially Disadvantaged Pre-School Children. Final, unpublished Head Start study, OEO Contract No. 536. For further information, contact Dr. George Friedlander, Yeshiva University, 55 Fifth Avenue, New York, New York 10003.)

38. Gage, N. L. (ed.), Handbook of Research on Teaching. Chicago: Rand McNally and Co., 1963.

39. Getzels, J.W., and P.W. Jackson, "The Teacher's Personality and Characteristics," Chapter 11 in N.L. Gage (ed.), Handbook of Research on Teaching. Chicago: Rand McNally and Co., 1963.

40. Gordon, Edmund W., "Characteristics of Socially Disadvantaged Children," Review of Educational Research, December 1965, Vol. 35, pp. 373-388.

41. Gordon, Edmund W., "Relevance of Behavior Theory to Directed Learning in Culturally and Socially Disadvantaged Children" (paper presented at 40th Annual Meeting, American Orthopsychiatric Association, March 1963).

42. Gordon, Sol, *Impact of Curriculum on Reading Readiness in Tosequena and Sharkey County, Mississippi*. (Unpublished Head Start study, OEO Contract No. 657. For further information, contact Dr. Sol Gordon, Rutgers State University, Highland Park, New Jersey 08903.)

43. *Greater Anchorage Head Start Project* (Local Head S[illegible]t study, non-OEO-funded.)

44. Grotberg, Edith, "Learning Disabilities and Remediation in Disadvantaged Children," *Review of Educational Research*, Vol. 35, pp. 413-425.

45. "Guidelines for Testing Minority Group Children," *The Journal of Social Issues*, April 1964, Vol. 20, pp. 129-145.

46. *Guidelines: Special Programs for Educationally Deprived Children*. U.S. Department of Health, Education and Welfare, OE Bulletin No. OE-35079, 1965

47. Harding, John, *A Comparative Study of Various Project Head Start Programs*, Progress Report. (Unpublished Head Start study, OEO Contract No. 545. For further information, contact Dr. John Harding, Department of Child Development and Family Relationships, Cornell University, Ithaca, New York 14851.)

48. Harris, Chester W. (ed.), *Problems in Measuring Change*. Madison, Wisconsin: University of Wisconsin Press, 1963.

49. Harris, Dale B., *Goodenough Draw-a-Man Test*. (Unpublished Head Start study, OEO Contract No. 684. For further information, contact Dr. Dale B. Harris, Department of Psychology, The Pennsylvania State University, University Park, Pennsylvania 16802.)

50. Havighurst, Robert, "Who Are the Socially Disadvantaged?" *Journal of Negro Education*, Summer 1964, Vol. 33, pp. 210-218.

51. *Headstart Program in the Alexandria City Schools*. (Final, non-OEO-funded Head Start study. For further information, contact Alexandria City Schools, Alexandria, Virginia.)

52. Head Start Report, Summer 1965, Warminster Township School District, Warminster, Pennsylvania. (Final report, non-OEO-funded. For further information, contact Warminster Township School District, Warminster, Pennsylvania.)

53. Health Supervision in Young Children in California, Findings of the 1956 Child Health Survey, State of California, Department of Public Health.

54. Hess, Robert D., Study of Assessment Techniques. (Progress report, unpublished Head Start study, OEO Contract No. 519. For further information, contact Dr. Robert Hess, University of Chicago, Urban Child Center, Chicago, Illinois 60637.)

55. Higgins, Edward L., West Warwick Head Start - 65 HS 0069. (Non-OEO-funded Head Start study. For further information, contact Dr. Edward L. Higgins, Director of Guidance and School Psychologist, West Warwick School Department, West Warwick, Rhode Island 02893.)

56. Hines, Ralph, "Social Expectations and Cultural Deprivation," Journal of Negro Education, Spring 1964, Vol. 33.

57. Hollander, Cornelia, Eight Weeks of Art. (Final unpublished Head Start study, OEO Contract No. 577. For further information, contact Mrs. Cornelia Hollander, 3502 Macomb Street, N.W., Washington, D.C. 20016.)

58. Holmes, Douglas and Monica Holmes, Evaluation of Two Associated YM-YWHA Head Start Programs. (Final unpublished Head Start study, OEO Contract No. 550. For further information, contact Drs. Douglas and Monica Holmes, YM-YWHA's of New York, 33 West 60th Street, New York, New York 10023.)

59. Horowitz, Frances and Howard M. Rosenfeld, Comparative Studies of a Group of Head Start and a Group of Non-Head Start Pre-School Children. (Final unpublished Head Start study, OEO Contract No. 521. For further information, contact Dr. Frances Horowitz, Department of Family Life, University of Kansas, Lawrence, Kansas 66045.)

60. Hunt, J. McVicker, "How Children Develop Intellectually," Children, May-June 1964, Vol. 11, pp. 83-91.

61. Illness Among Children, Data from U.S. National Health Survey. Children's Bureau, U.S. Department of Health, Education and Welfare, 1963.

62. Jacobs, Mildred, and James Shafer, Some Effects of Project Head Start on 178 Children in Cleveland County, Oklahoma. (Final, unpublished Head Start study, non-OEO-funded. For further information, contact Mildred Jacobs or James Shafer, University of Oklahoma, Norman, Oklahoma.)

63. John, Vera, Analysis of Story Retelling as a Measure of the Effects of Ethnic Content in Stories, Progress Report. (Unpublished Head Start study, OEO Contract No. 577. For further information, contact Dr. Vera John, Yeshiva University, 55 Fifth Avenue, New York, New York 10003.)

64. Johnson, Henry S., The Effects of Montessori Educational Techniques on Culturally Disadvantaged Head Start Children. (Final unpublished Head Start study, OEO Contract No. 631. For further information, contact Dr. Henry S. Johnson or Dr. James Slaver (Director), Clavis Montessori Schools, 2025 East Chapman, Fullerton, California 92631.)

65. Kennedy, W.A., V. Van de Riet, and J.C. White, "Use of the Terman-Merrill Abbreviated Scale on the 1960 Stanford-Binet Form L-M on Negro Elementary School Children of the Southeastern United States," Journal of Consulting Psychology, Vol. 27 (1963), pp. 456-457.

66. Kerns, Robert D., West Virginia Statewide Impact on Children Served. (Unpublished Head Start study, OEO Contract No. 541. For further information, contact Dr. Robert Kerns, West Virginia Department of Mental Health, 1721 Quarrier Street, Charleston, West Virginia 25311.)

67. Krider, Mary A., An Evaluation of Head Start Pre-School Enrichment Programs as They Affect the Intellectual Ability, the Social Adjustment, and the Achievement Level of Five-Year-Old Children Enrolled in Lincoln, Nebraska. (Progress report, unpublished Head Start study, OEO Contract No. 543. For further information, contact Dr. Mary Krider, Psychological Clinic, University of Nebraska, Lincoln, Nebraska 68508.)

68. Lamb, Howard, Project on the Development of Self-Other Concepts During Project Head Start. (Unpublished Head Start study, OEO Contract No. 511. For further information, contact Dr. Howard E. Lamb, School of Education, University of Delaware, Newark, Delaware 19711.)

69. Loomis, James, Review and Evaluation of the Orientation Program for Project Head Start Conducted by New York University, New York University, Division of General Education and Extension Services.

70. Lord, F.M., "Elementary Models for Measuring Change," Chapter 2 in C.W. Harris (ed.), Problems in Measuring Change. Madison, Wisconsin: University of Wisconsin Press, 1963.

71. McGaughy, Robert H., Operation Head Start, Newark, Ohio, August 1965. (Final study, non-OEO-funded. For further information, contact Mr. Robert McGaughy, 19 North Fifth Street, Newark, Ohio.)

72. Meyer, Henry J., et al. Girls at Vocational High: An Experiment in Social Work Intervention. New York: Russell Sage Foundation, 1965.

73. Miller, Martin B., and Barrie Cassileth, The Sub-Professional Worker in the Head Start Program. (Preliminary report, OEO-funded study. For further information, contact Dr. Martin Miller, Yeshiva University, New York, New York.)

74. Montez, Philip, Evaluation--Head Start--Bilingual Children. (Progress report, unpublished Head Start study, OEO Contract No. 547 For further information, contact Mr. Philip Montez, Foundation of Mexican-American Studies, 1216 West Second Street, Los Angeles, California 90026.)

75. National Opinion Research Center, Collection of Social History, Experience Information and Parent Evaluation of Head Start on 1% Sample Nationwide. (Final unpublished Head Start study, OEO Contract No. 544. For further information, write NORC, 5720 Woodlawn Avenue, Chicago, Illinois 60637.)

76. Nelson, W.E. (ed.), Textbook of Pediatrics, 8th Edition. Philadelphia: Saunders, 1964.

77. Newark, New Jersey, Project Head Start. (Final non-OEO-funded study. For further information, contact United Community Corporation.)

78. Operation Head Start, Charlestown, Massachusetts. (Local Head Start study, non-OEO-funded.)

79. Orshansky, Mollie, Counting the Poor: Another Look at the Poverty Profile, Social Security Administration, January 1965.

80. Ortiz, Alfonso, Project Head Start in a New Mexico Indian Community. (Final unpublished Head Start study, OEO Contract No. 539. For further information, write Mr. Alfonso Ortiz, Department of Anthropology, University of Chicago, 1126 East 59th Street, Chicago, Illinois 60637.)

81. Osborne, R.T., "Racial Differences in Mental Growth and School Achievement: A Longitudinal Study," *Psychological Reports*, Vol. 7 (1960), pp. 233-239.

82. Ozer, Mark, *The Effects of Neurological and Environmental Factors on the Language Development of Head Start Children: An Evaluation of the Head Start Program.* (Final unpublished Head Start study, OEO Contract No. 528. For further information, write Dr. Mark Ozer, Children's Hospital, 2125 13th Street, N.W., Washington, D.C. 20009.)

83. Palomares, Vvaldo H., and Henry S. Johnson, *A Study of Some Ecological, Economic and Social Factors Influencing Parental Participation in Project Head Start* and *A Pilot Study of Community Opinion and Understanding of the Coachella Valley Project Head Start.* (Final unpublished Head Start study, OEO Contract No. 534. For further information, write Mr. Vvaldo Palomares or Dr. Henry S. Johnson, University of California Extension, Riverside, California 92507.)

84. Passow, A. Harry (ed.), *Education in Depressed Areas.* Bureau of Publications, Teachers College, Columbia University, New York, 1963.

85. Pettigrew, J.F., "Negro American Personality: Why Isn't More Known?" *Journal of Social Issues*, April 1964. Vol. 20, pp. 4-23.

86. Pierce-Jones, John, S. Thomas Friedman, and William E. Barron, *Outcomes of Individual and Programmatic Variations Among Project Head Start Centers, 1965.* (Final unpublished Head Start study, OEO Contract No. 508. For further information, contact Dr. John Pierce-Jones, Personnel Services of Research Center, University of Texas, Austin, Texas 78712.)

87. Porter, Philip J., *Evaluation of Head Start Educational Program in Cambridge, Mass.* (Final unpublished Head Start study, OEO Contract No. 529. For further information, contact Dr. Philip J. Porter, Chief, Pediatric Service, Cambridge City Hospital, Howard Medical School, Cambridge, Massachusetts.)

88. Prather, Misha S., Richard D. Alter, O.J. Harvey, James K. Hoffmeister, and B. Jack White, *Project Head Start Teacher-Pupil-Parent Interaction Study.* (Final unpublished Head Start study, OEO Contract No. 517. For further information, contact Dr. Misha S. Prather, University of Colorado, 1165 Broadway, Boulder, Colorado 80304.)

89. *Project Head Start One-Percent Sample Summarization (Weighted),* U.S. Bureau of the Census, Demographic Operations Division, November 1965.

90. *Project Head Start Staff Training Program for 1965*, August 1965. (Final, unpublished Head Start study, OEO Contract No. 170. For further information, contact National University Extension Association, University of Maryland, College Park, Maryland.)

91. *Project Head Start, Summer 1965: A Summary Report*. (Archdiocese of Chicago School Board, non-OEO-funded final report. For further information, contact Archdiocese of Chicago School Board, Chicago, Illinois.)

92. Raph, Jane B., *Language Research Study--Project Head Start.* (Final, unpublished Head Start study, OEO Contract No. 535. For further information, contact Dr. Jane Raph, Department of Educational Psychology, Rutgers State University, New Brunswick, New Jersey.)

93. Rice, Robert R., *Housing and Home Environment from Head Start Population*. (Unpublished Head Start study, OEO Contract No. 583. For further information, contact Mr. Robert R. Rice, University of Missouri, 1003 Hickory Hill Drive, Columbia, Missouri 65202.)

94. Riessman, Frank, *The Culturally Deprived Child.* New York: Harper and Row, 1962.

Reissman, Frank, "The Overlooked Positives of Disadvantaged Groups," *Journal of Negro Education,* Summer 1964, Vol. 33, pp. 225-231.

95. Scheffe, Henry, *The Analysis of Variance*. New York: John Wiley and Sons, Inc., 1959.

96. Sigel, Irving, *Comparative Study: Head Start Children and Control. Relationship of Language to Classification and Behavior*. (Final, unpublished Head Start study, OEO Contract No. 542. For further information, contact Dr. Irving Sigel, Palmer Institute of Home Development and Family Life, 71 East Terry Avenue, Detroit, Michigan 48202.)

97. Silberstein, Richard, *Comparative Study: Head Start and 3 Control Classes (2 Disadvantaged and 1 Middle Class)*. (Final, unpublished Head Start study, OEO Contract No. 516. For further information, contact Dr. Richard Silberstein, The Staten Island Mental Health Society, 657 Costelton Avenue, Staten Island, New York 10301.)

98. Smiley, Marjorie, "Research and Its Implications," in *Improving English Skills of Culturally Different Youth*. U.S. Department of Health, Education and Welfare, OE Bulletin No. OE-30012, 1964.

99. Soule, Allen, Northfield, Vermont: A Community Depth Study. (Final, unpublished Head Start study, OEO Contract No. 621. For further information, contact Dr. Allen Soule, Central Vermont Community Action Council, Montpelier, Vermont 05602.)

100. Sprigle, Herbert, Outline for Preschool Education. (Final, unpublished Head Start study, OEO Contract No. 745. For futher information, contact Dr. Herbert Sprigle, Learning to Learn School, 1936 San Marco Boulevard, Jacksonville, Florida.)

101. Stern, G.G., "Measuring Noncognitive Variables in Research on Teaching," Chapter 9 in N.L. Gage (ed.), Handbook of Research on Teaching. Chicago: Rand McNally and Co., 1963.

102. Summary of Head Start Observations, Chicago. (Local Head Start study, non-OEO-funded.)

103. Swift, Joan W., "Effects of Early Group Experience: The Nursery School and Day Nursery," in Hoffman and Hoffman (eds.), Review of Child Development Research. New York: Russell Sage Foundation, 1964.

104. Tomlinson, Ethel, "Language Arts Skills Needed by Lower Class Children," Elementary English, May 1956, Vol. 33, pp. 279-283.)

105. Van Egmond, Elmer, George Miller, Sandra Jackanicz and George Cheong, Operation Head Start: An Evaluation. (Final unpublished Head Start study, OEO Contract No. 537. For further information, contact Dr. Elmer Van Egmond, Lesley College, 29 Everett Street, Cambridge, Massachusetts 02138.)

106. Wallen, N.E., and R.M.W. Travers, "Analysis and Investigation of Teaching Methods," Chapter 10 in N. L. Gage (ed.), Handbook of Research on Teaching. Chicago: Rand McNally and Co., 1963.

107. Wax, Murray, and Rosalie Wax, Indian Communities and Project Head Start and An Appraisal of Possibilities for a Head Start Program Among the Potawatomi Indians of Kansas. (Final, unpublished Head Start study, OEO Contract No. 520. For further information, contact Drs. Murray and Rosalie Wax, Department of Sociology, University of Kansas, Lawrence, Kansas 66045.)

108. Wirtz, Morvin A., "Increased Concern for Disadvantaged Children and Youth: Implications for the Education of the Mentally Retarded," Education and Training of the Mentally Retarded, February 1966, Vol. 1, pp. 8-10.

109. Withall, J., and W.W. Lewis, "Social Interaction in the Classroom," Chapter 13 in N.L. Gage (ed.), *Handbook of Research on Teaching*. Chicago: Rand McNally and Co., 1963.

110. Wolff, Max, *Effect of Pre-School Education on Adjustment and Achievement in Elementary School* and *Study of Recruitment Methods Used by Head Start Centers. Factors Contributing to Success or Failure, Parent Motivation and Response to Recruitment Efforts*. (Final, unpublished Head Start study, OEO Contract No. 577. For further information, contact Dr. Max Wolff, 59 Stephenson Boulevard, New Rochelle, New York 10801.)

111. Woolman, Myron, *Cultural Asynchrony and Contingency in Learning Disorders*. Washington, D.C,: Institute of Educational Research, 1965 (Multilith).

112. Zimmerman, Dorothy, *Gains Made by 38 Head Starters on Peabody Picture Vocabulary Test of Mental Maturity*, *Percentile Ranks of Head Starters and non-Head Starters on Readiness Inventory the Second Week of School*, and *Traits of a First Grader*. (Non-OEO-funded Head Start study. For further information, contact Mrs. Dorothy Zimmerman, Supervisor of Instruction, County Schools, Caswell Action Committee, Inc., P.O. Box 566, Yanceyville, North Carolina 27379.)

113. Gerard, Roslyn, *Dunbar Center, Syracuse, N.Y.* (Final study, non-OEO-funded.)

114. *Evaluation of Head Start (1965)*, Southern Consumers' Education Foundation, Lafayette, Louisiana.

115. Jewett, Arno, Joseph Mersand, and Doris V. Gunderson (eds.), *Improving English Skills of Culturally Different Youth in Large Cities*. U.S. Department of Health, Education and Welfare, OE Bulletin No. OE-30012, 1964.

116. Moore, Alexander M., "Personal and Professional Qualifications for Teachers of Culturally Different Youth," in Arno Jewett, et al (eds.), *Improving English Skills of Culturally Different Youth in Large Cities*. U.S. Department of Health, Education and Welfare, OE Bulletin No. OE-30012, 1964.

117. Economic Opportunity Council of the Ozarks, Inc., Mountain Home, Arkansas 72653. Paul F. Mummey, Director.

118. West Valley Child Development Center, E. 8818 Grace, Spokane, Washington 99206. Marvin D. Smith, Director.

119. Cincinnati Public Schools, 608 E. McMillan Street, Cincinnati 6, Ohio. Anna M. Evans, Director of Early Childhood Education.

120. Pennsylvania Avenue School, Project Head Start, Atlantic City, New Jersey 08401. Jane M. Flipping, Project Supervisor.

121. Snyder Consolidated Independent Schools, Snyder, Texas 79549. Dr. Robert L. Clinton, Superintendent.

122. Resnick, Melvyn, Completed File Copy of Reports on Head Start Centers with Non-English Speaking Children, Summer, 1965. (Final unpublished Head Start consultants' study. For further information, contact Melvyn Resnick, Department of Languages and Linguistics, University of Rochester, Rochester, New York 14627.)

123. Reiff, Donald G., The Language Situation in Project Head Start Centers 1965. (Final unpublished Head Start study, OEO Contract No. 932. For further information, contact Dr. Donald G. Reiff, University of Rochester, Rochester, New York 14627.)

124. Cochran, W. G., "Analysis of Covariance: Its Nature and Uses," Biometrics, 13, 261-281, 1957.

125. Siegel, S., Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill, 1956.

126. Cooley, W. W., and P.R. Lohnes, Multivariate Procedures for the Behavioral Sciences. New York: Wiley and Sons, Inc., 1962.

ED018250

RESULTS OF THE SUMMER 1965 PROJECT HEAD START

PRC R-795

VOLUME II
APPENDIXES

9 May 1966

Prepared for

OFFICE OF ECONOMIC OPPORTUNITY
DIRECTOR, PROJECT HEAD START RESEARCH AND EVALUATION

PLANNING RESEARCH CORPORATION
LOS ANGELES, CALIFORNIA WASHINGTON, D.C.

PS000278

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

RESULTS OF THE SUMMER 1965 PROJECT HEAD START

PRC R-795

VOLUME II
APPENDIXES

9 May 1966

Prepared for

OFFICE OF ECONOMIC OPPORTUNITY
DIRECTOR, PROJECT HEAD START RESEARCH AND EVALUATION
Under Contract OEO-753

By

H. Russell Cort, Jr.
William D. Commins, Jr.
Kenneth L. Deavers
Ruth Ann O'Keefe
James F. Ragan, Jr.

PLANNING RESEARCH CORPORATION
LOS ANGELES, CALIFORNIA WASHINGTON, D.C.

PS 000278

TABLE OF CONTENTS

Page

APPENDIX A Data Collection and Test Instruments, Project Head Start 1965 . . . . A-1

APPENDIX B Statistical Models and Analyses B-1

APPENDIX C Height and Weight Tables C-1

APPENDIX D Further Definitions of the Population Served D-1

APPENDIX E IQ Scores of Culturally Disadvantaged Children Who Were Tested on More Than One Intelligence Test E-1

APPENDIX F Analysis of CDC Differences F-1

APPENDIX G Worker Evaluation Responses G-1

APPENDIX H Additional Head Start Studies H-1

APPENDIX I The Preschool Inventory (PSI) and the Behavior Inventory (BI) I-1

4

APPENDIX A

DATA COLLECTION AND TEST INSTRUMENTS PROJECT HEAD START 1965

Following is a list of tests or questionnaires administered in connection with the summer 1965 Head Start program.[1] Copies of these tests are appended herewith.

A. Children

- Medical/Dental and Family Information
- Preschool Inventory[2]
- Behavior Inventory[2]
- Psychological Screening Procedure

B. Staff

- Staff Member Information Sheet
- Paid and Voluntary Workers' Evaluation
- Workers' Attitude Scale[2]

C. Parents

- Parent Evaluation
- Parent Participation Record (completed by staff)

D. Other

- Consultants' Checklist
- National Opinion Research Center Parent Interview (replaced the Social History/Social Experience Inventory)

---

[1] Peabody Picture Vocabulary Test has not been included.

[2] Administered pre- and post-Head Start as a measure of impact.

CAP HS 31 PAGE 1
BUDGET BUREAU NO. 116-6503
FORM APPROVED JUNE 30, 1966
COPY

All information which would permit identification of the individual will be held strictly confidential.

OFFICE OF ECONOMIC OPPORTUNITY
PROJECT HEAD START
MEDICAL/DENTAL AND FAMILY INFORMATION

I. IDENTIFICATION

Card # 02 (1-2)

1. Child Development Center No. 65HS– ______ – ______ (Grant No.) (4-14)

2. Child's Identification No. ____ – ______ (State Code) (19-21)

3a. Child's Name ______ (Last) (22-36) ______ (First) (37-47) ____ (MI) (48) ____ (Suffix) (49-51)

3b. County of Residence ______ (52-71)

4. Date of this Report ____ / ____ / ____ (month) (72-73) (day) (74-75) (year) (76-77)

II. GENERAL – CHILD

Card # 03 (1-2)

5. Child's Address:
______ (Street and Number or RFD) (22-41)
______ (City of Place) (42-61) ______ (State Abbr.) (62-65)

6. How old is child? ______ (Years) ______ (Months)

7. Birthdate: ____ / ____ / ____ (Month) (66-67) (Day) (68-69) (Year) (70-71)

8. Sex: Male ☐1 Female ☐2 (72)

9. Is the child (Check one) (73)
White ☐1 Negro ☐2 American Indian ☐6
Asian ☐3 Eskimo ☐4 Unknown ☐5

10. Is the child (check one) (74)
Puerto Rican ☐1 Mexican American ☐2
Other ☐3

III. MEDICAL/DENTAL – HISTORY

11. a. Has the child been hospitalized *(overnight or longer)* at any time during the past year? (75)
Yes ☐1 No ☐2 Don't Know ☐3

b. If Yes, how many times? (76)
1 ☐1 2 or 3 ☐2 4 or more ☐3

12 a. What kind of problem made the hospital stay necessary? (77)
An illness ☐1 Surgery ☐2 Injury from an accident ☐3 Tonsillectomy/Adenoidectomy ☐4 Other ☐5

b. What was specific reason? ______ /DXH/

13. Was the child born in a: (78)
Hospital ☐1 At home ☐2 Other ☐3 Don't Know ☐4

14. About how many pounds did the child weigh at birth? *(Give to nearest pound)* (79)
Under 5 ☐1 5 – 7 ☐2 8 – 10 ☐3 Over 10 ☐4

Card # 04 (1-2)

15. Was there anything unusual about the child or was anything wrong when he(she) was born? (22)
Yes ☐1 No ☐2 Don't Know ☐3

16. What was the matter *(diagnosis)*?
______ /DXB/

17. How is the child's general health? (23)
Very good ☐1 Good ☐2 Fair ☐3 Poor ☐4

18. If general health is fair or poor, what is the trouble?
______ /PX1/
______ /PX2/
______ /PX3/

19. Which best describes the child's activity? (24)
a. Not able to take part in ordinary play with other children ☐1
b. Able to play with other children, but limited in amount or kind of play ☐2
c. Not limited in any of these ways ☐3

20. How long has it been since the child has visited a doctor? (25)
In the past 12 months ☐1 1 – 2 Years ☐2 More than 2 Years ☐3 Never ☐4

21. How long has it been since the child has visited a dentist? (26)
In the past 12 months ☐1 1 – 2 Years ☐2 More than 2 Years ☐3 Never ☐4

22. Has the child had any serious illness or accident in the past year? (27)
Yes ☐1 No ☐2 Don't Know ☐3

23. What was the illness or injury? ______ /DXL/

IV. IMMUNIZATION HISTORY

24. a. How many baby shots (DPT) has the child received? (28)
None ☐0 1☐1 2☐2 3☐3 4☐4 5☐5 Can't remember ☐6

b. Series is: (29)
Complete ☐1 Incomplete ☐2 Uncertain ☐3

25. Any Salk poliovirus vaccine received? (30)
Yes ☐1 No ☐2 Don't Know ☐3

26. a. How many oral poliovirus vaccine? (31)
None ☐0 1 ☐1 2 ☐2 3 or 4 ☐3 Can't Remember ☐4

b. Series is: (32)
Complete ☐1 Incomplete ☐2 Uncertain ☐3

27. a. Any measles vaccine received? (33)
Yes ☐1 No ☐2 Don't Know ☐3

b. If Yes, type of vaccine: (34)
Killed ☐1 Live, attenuated ☐2
Live, with Gamma Globulin ☐3 Combination of these ☐4

28. Any tuberculosis vaccine (BCG) received? (35)
Yes ☐1 No ☐2 Don't Know ☐3

29. a. Is vaccination scar present? (36)
Yes ☐1 No ☐2 Not sure ☐3

b. How many years since last smallpox vaccination (37)
Within last 3 years ☐1 More than 3 years ☐2 Never ☐3 Don't Know ☐4

30. a. Has the child received a tuberculin test before this Summer? (38)
Yes ☐1 No ☐2 Don't Know ☐3

b. Did the Nurse or Doctor say it was (39)
Positive ☐1 Negative ☐2 Can't Remember ☐3

31. a. Has the child been exposed to someone with active tuberculosis? (40)
Yes ☐1 Probably No ☐2 Don't Know ☐3

b. If yes, what is that person's relationship to child? ______ (relation)

CAP HS 31 PAGE 2

COPY

OFFICE OF ECONOMIC OPPORTUNITY
PROJECT HEAD START
MEDICAL/DENTAL AND FAMILY INFORMATION

PLEASE DO NOT USE

Child Development Center No. 65HS_ ________-______

Name ________ (Last) ________ (First) ________ (MI) ________ (Suf)

Childs Identification No. ____-________

V. EXAMINATION

32. Vision screening test
(a) Acuity – Right eye: ____/____ (41-43) (44-46) Left eye: ____/____ (47-49) (50-52); Abnormal ☐1 Test normal ☐2 Not done ☐3 (53)
(b) Were glasses worn for test: Yes ☐1 No ☐2 None usually worn ☐3 (54)
(c) Hyperopia, plus lens Right ______ (55-56) Left ______ (57-58); Abnormal ☐1 Test normal ☐2 Not done ☐3 (59)
(d) Cover test, Near – Right ______ (60) Left ______ (61); Distant – Right ______ (62) Left ______ (63);
Abnormal ☐1 Test normal ☐2 Not done ☐3 (64)
(e) Worth Dot Test Pass ☐1 Fail ☐2 (65) (f) Other abnormality noted ☐1 (66)
Describe: ____________
(g) Results of screening: Unsatisfactory ☐1 Unsatisfactory, referred for retesting ☐2 No referral ☐3
Referral for further diagnosis or treatment ☐4 (67)

33. Dental Examination *(to be completed by a dentist or his assistant or from the dentists examination report.)*
(a) Performed by – Dentist ☐1 Physician ☐2 Nurse ☐3 Other ☐4 (68)
(b) Findings: Caries ☐1 (69) Number of carious teeth ____ (70-71)
Infection ☐1 (72) Malocclusion ☐1 (73) Peridental Disease ☐1 (74)
No Disease ☐0 Other ☐1 (75)
Describe: ____________
(c) Disposition: No Referral ☐1 Referral or plan for additional Dental Care ☐2
Other ☐3 (76)
Describe: ____________

Card # 03 (1-2)

34. Child's Weight ________ Lbs. (22-24)

35. Child's Height ________ Inches (25-26)

36. Tuberculin test given at this Center (27-33)
Given: ____/____/____ (month) (day) (year) Type of test *(Check one)*: Mantoux ☐1 Tine ☐2 Patch ☐3

37. a. Results of tuberculin test done at the Center –
Positive ☐1 Negative ☐2 Uncertain ☐3 (34)
b. Area of induration at test site ________ mm. (35-36)

38. Urine tests:
a. Albumin: Positive ☐1 Negative ☐2 (37) Test used and result ____________
b. Sugar: Positive ☐1 Negative ☐2 (38) Test used and result ____________

39. Blood determination: Test used and result –
Micro-hematocrit ☐1 (39) ____ % (40-41)
Method ____________ Hemoglobin ☐2 ____ Gm.

40. a. Screening test for hearing: (42)
Not done ☐1 Audiometry ☐2 Voice or other ☐3

b. Results: (43)
Unsatisfactory ☐1 Normal test ☐2 Abnormal test ☐3

c. Referral: (44)
None ☐1 Hearing and Speech Center ☐2
Otolaryngologist ☐3 Other ☐4

VI. DIAGNOSES AND IMPRESSIONS

Check these diagnoses below that represent the physician's impression of the child's medical status. (45-68)

	Present	Suspect		Present	Suspect		Present	Suspect		Present	Suspect
41. Asthma	☐1	☐2	47. Tonsil and/or Adenoid Disease	☐1	☐2	53. Other Orthopedic Problems	☐1	☐2	59. Convulsive Disorder	☐1	☐2
42. Hayfever	☐1	☐2	48. Anemia	☐1	☐2	54. Urinary Tract Infection	☐1	☐2	60. Kidney Disease	☐1	☐2
43. Other Allergies	☐1	☐2	49. Hernia, Inguinal	☐1	☐2	55. Frequent Gastrointestinal Upset	☐1	☐2	61. Mental Retardation	☐1	☐2
44. Skin Infection or Other Disease	☐1	☐2	50. Chronic Otitis Media	☐1	☐2	56. Enuresis	☐1	☐2	62. Cerebral Palsy	☐1	☐2
45. Frequent Respiratory Illness	☐1	☐2	51. Heart Disease	☐1	☐2	57. Speech Abnormality	☐1	☐2	63. Nutritional Disorder	☐1	☐2
46. Bronchitis	☐1	☐2	52. Orthopedic Problem Feet, Lower Extremities	☐1	☐2	58. Parasitic Infestation	☐1	☐2	64. Other Problem(s)	☐1	☐2

65. Enter the item number of the diagnosis(es) of which the parent has been aware: ______ (69-70) ______ (71-72) ______ (73-74) ______ (75-76)

Write Out Diagnoses If Not In Above List, Enter One To A Line:

66. /DX1/____________
67. /DX2/____________
68. /DX3/____________
69. /DX4/____________
70. Was the parent aware of any of the additional diagnoses? Yes ☐1 No ☐2 (77)

Write Out Other Impressions Below:

71. /IM1/____________
72. /IM2/____________
73. /IM3/____________

ORIGINAL - To be returned

OFFICE OF ECONOMIC OPPORTUNITY
PROJECT HEAD START
MEDICAL/DENTAL AND FAMILY INFORMATION

Child Development Center No. 65HS-________-______ Name ________ (Last) ________ (First) (MI) (Suffix) Child Identification No. ____-_____

VII. FAMILY HISTORY

74. Who does the child live with: Mother and Father? ☐1 Mother ☐2 Father ☐3 Other ☐4 If Other, what is the relationship of that person ________

75. Mother's Name ________ (Last) ________ (First) ____ (MI) ____ (Suf) 76. Age: ____ Years 77. Is the Mother deceased? Yes ☐1 No ☐2 Don't Know ☐3

78. If the child lives with Mother only
Is the Mother now Widowed ☐1 Divorced ☐2 Separated ☐3 Other ☐4

79. (a) What was the highest school grade completed by the Mother?
0 ☐1 1–6 ☐2 7–8 ☐3 9–11 ☐4
(b) High School graduate? Yes ☐1 No ☐2
(c) Any college? Yes ☐1 No ☐2
(d) Don't Know level completed ☐1

80. (a) How many full term pregnancies has the Mother had? ________, Not sure ☐1 (b) No. of children living? ________ Don't know ☐1

81. (a) Does the Mother usually work outside the home, or is she looking for a job now? Yes ☐1 No ☐2 Not Sure ☐3
(b) If the Mother usually works does she work: Full time ☐1 Part time ☐2 Once in a while ☐3
(c) If the Mother usually works what work does she do when she is employed? ________
(d) What type of work is this? *Check One:* Professional, Technical, Managerial ☐1 Clerical, Sales ☐2 Craftsman, foreman, Operative ☐3
Service or Private Household worker ☐4 Farmer ☐5 Laborer ☐6 Student ☐7

82. Was she out of work and looking for a job at any time during the past year? Yes ☐1 No ☐2 Can't Remember ☐3

83. About how long was she out of work and looking for a job in the past year?
Two Months or Less ☐1 3–6 Months ☐2 7–9 Months ☐3 10–12 Months ☐4 Don't Know ☐5

84. Father's Name ________ (Last) ________ (First) ____ (MI) ____ (Suf) 85. Age: ____ (Years) 86. Is the Father deceased: Yes ☐1 No ☐2 Don't Know ☐3

87. If the child lives with Father but without the Mother, is the Father – Widowed ☐1 Divorced ☐2 Separated ☐3 Other ☐4

88. (a) What was the highest school grade completed by the Father?
0 ☐1 1–6 ☐2 7–8 ☐3 9–11 ☐4
(b) High School graduate? Yes ☐1 No ☐2
(c) Any college? Yes ☐1 No ☐2
(d) Don't Know level completed ☐1

89. (a) Does the Father usually either work outside the home, or is he looking for a job now? Yes ☐1 No ☐2 Not Sure ☐3
(b) If the Father usually works, does he work – Full time ☐1 Part time ☐2 Once in a while ☐3
(c) If the Father usually works, what work does he do when he is employed? ________
(d) What type of work is this? *Check One.* Professional, Technical, Managerial ☐1 Clerical, sales ☐2 Craftsman, foreman, Operative ☐3
Service or Private Household Worker ☐4 Farmer ☐5 Laborer ☐6 Student ☐7

90. Was the Father out of work and looking for a job at any time during the past year? Yes ☐1 No ☐2 Can't Remember ☐3

91. About how long was the Father out of work and looking for a job?
Two Months or Less ☐1 3–6 Months ☐2 7–9 Months ☐3 10–12 Months ☐4 Don't Know ☐5

Card 05 (Cont'd) (14)

92. Has the family received any public assistance or ADC payments in the past year? Yes ☐1 No ☐2 Don't Know ☐3

(15)

93. About how much income from all sources did your family have during the past twelve months? *(Include public assistance checks)*
Less than $1000 ☐1 $1000-$1999 ☐2 $2000-$2999 ☐3 $3000-$3999 ☐4 $4000-$4999 ☐5 $5000-$5999 ☐6 $6000-$7999 ☐7 $8000-$9999 ☐8 $10,000 Plus ☐9 Don't Know ☐0

94. Who usually took care of the child during the day last year? Parent ☐1 Nursery School ☐2 Baby Sitter ☐3 Sibling ☐4 Other Adult Relative ☐5 Other ☐6 ________

95. How many people live together in the household? ________

96. Of this number, how many are children under 16 years of age? ________

97. Location of home of child: Urban and Suburban ☐1 Farm ☐2 Rural, Non-Farm ☐3 Other ☐4

[illegible] ☐ [illegible] ☐3 [illegible]dian [illegible] Fo[illegible]rent [illegible] Oth[illegible]

Budget Bureau No. 116-6504
Approval expires March 31, 1966

PRESCHOOL INVENTORY

Time started ______________
Time finished ______________

Child's name ______________________ Date of test ______________
Place of test _________________ Child Development Center ID number _______
Child's ID number ___________ Examiner's staff ID number ____________
Child's major language _______________________________________
Language in which test was given _______________________________________

CAP-HS FORM 42 JUN 65

PRESCHOOL INVENTORY

Begin by asking the child the following questions:

		KNOWS: YES	KNOWS: NO
1. What is your name?	1.	___	___
2. If child gives first name only, probe for last name. For example, "Johnny what? What's your last name?"	2.	___	___
3. Give the child a sheet of plain white paper and a crayon and say, "Draw me a picture of a man. . . a whole man, not just part of a man." Then do the same with "Now draw a picture of a woman. . . a whole woman, not just part of a woman."	3.	___	___
4. How old are you? ____________	4.	___	___
5. When is your birthday? (Score yes for month or date) ______________	5.	___	___
6. Where do you live? (Address, location of housing project, etc.)	6.	___	___
7. What school will you go to? ______________________	7.	___	___
8. What is your teacher's name? ______________________	8.	___	___

9. "Who are some of the children in your group?" (Probe for four names. If child says first name only, probe for last name; e.g. "Tommy? Tommy who?") Circle number of first names given. 9. 0 1 2 3 4

10. Circle number of last names given. 10. 0 1 2 3 4

I. Point to the following parts of the examiner's body and say, "What's this?"
II. For all items missed in 11-20, go through again, say, "show me your ____."

		I. Gives Name	I. Wrong	I. D.K.	II. Shows	II. Wrong or D.K.
11. Ear	11.	___	___	___	___	___
12. Finger	12.	___	___	___	___	___
13. Neck	13.	___	___	___	___	___
14. Back	14.	___	___	___	___	___
15. Eye	15.	___	___	___	___	___
16. Elbow	16.	___	___	___	___	___
17. Heel	17.	___	___	___	___	___
18. Shoulder	18.	___	___	___	___	___
19. Eyebrow	19.	___	___	___	___	___
20. Knee	20.	___	___	___	___	___

Now ask the child these questions: "How many _____ do you have?"

		Right	Wrong	D.K.
21. Eyes	21.	____	____	____
22. Noses	22.	____	____	____
23. Ears	23.	____	____	____
24. Heads	24.	____	____	____
25. Feet	25.	____	____	____
26. Hands	26.	____	____	____
27. Toes	27.	____	____	____
28. Mouths	28.	____	____	____
29. Necks	29.	____	____	____
30. Broken arms (or something else the child obviously doesn't have, to elicit "none" or "not any")	30.	____	____	____
Now ask, "How many wheels does a _______ have?"				
31. Car	31.	____	____	____
32. Bicycle	32.	____	____	____
33. Tricycle (or baby bicycle)	33.	____	____	____
34. Wheelbarrow	34.	____	____	____
35. Rowboat	35.	____	____	____

36. "Let's hear you count out loud". If no responses, start child by saying, "One. . ." Circle highest number given, up to five.

36. 1 2 3 4 5

37. (Hold up piece of paper). Say, "Do you know what a corner is? Show me."

37. ________ can ________ can't

38. "How many corners does this sheet of paper have?"

38. ________ knows ________ doesn't

For the next few items take out the box of 12 checkers, all the same color. Give the child the opportunity to manipulate them briefly.

Seeing that all the checkers touch one another and occupy more or less the same area, (all flat on table), put the checkers in two groups in front of the child, as follows and ask (pointing first to one, then the other):

Groups of checkers		Right	Wrong
39. 2 & 3 "Which one has more checkers in it?"	39.	_____	_____
40. 5 & 6 "Which one has more checkers in it?"	40.	_____	_____
41. 6 & 6 "Which one has more checkers in it?"	41.	_____	_____

42. Recombine and make two groups, 8 and 2. Say, pointing, "Which group has fewer/less?"

Take away all but 5 of the checkers. Instruct the child as follows: "Put these checkers next to each other in a line/row." See to it that a half-inch space is made between each two checkers. Give whatever guidance is needed to yield a fairly straight row. Say:

43. "Give me the middle one."
44. "Give me the first one."
45. "Give me the last one."
46. "Give me the second one."
47. "Give me the next-to-last one."

(Note: Credit first-last in terms of a child's choice; i.e. either end of the row of blocks. All subsequent choices should be consistent with that choice, however.)

Next, line up the checkers in a row, all touching. Take out the two black checkers and stack one on top of the other at one end to make an engine. Say, "Let's pretend this is a train. You know what a train is, don't you? You know, it has a lot of cars, one after the other, like this."

48. "Do you know what we call the first car, the one that pulls the train? (Probe to elicit engine.)

49. "What do we call the last car on a freight train?" If no correct response is given to either of the above:

50. "What pulls the train, the engine or the caboose?"

51. "What do we call the last car on the freight train, the engine or the caboose?

	Right	Wrong
42.	____	____
43.	____	____
44.	____	____
45.	____	____
46.	____	____
47.	____	____
48.	____	____
49.	____	____
50.	____	____
51.	____	____

Detach the page with the line, triangle, circle, and square drawn on it. Give it to the child. Ask him:

				I.		II.	
			Gives Name	Gives Similar Object	D.K. or Wrong	Points Yes	No
52. "What do we call this?	(Circle)	52.	____	____	____	____	____
53.	(Line)	53.	____	____	____	____	____
54.	(Square)	54.	____	____	____	____	____
55.	(Triangle)	55.	____	____	____	____	____

If child cannot name shape, ask him to point to ones missed. (Column II).

Using the same sheet, say to the child, "Now I'd like you to make some drawings. Make one like this," (and point to):

		Recognizable	Unrecognizable
56. Line	56.		
57. Circle	57.		
58. Square	58.		
59. Triangle	59.		

Now ask the child to point to "the one which is most like a ________"

		Right	Wrong
60. Wheel	60.		
61. Window	61.		
62. Piece of string	62.		
63. Tent or teepee	63.		
64. Ice cream cone	64.		
65. Plate/dish	65.		
66. Stick	66.		

Take the paper from the child and continue with: "Which is bigger, a ________ or a ________?"

67. Ball or bicycle	67.		
68. Tree or flower	68.		
69. Telephone or television	69.		
70. Man or boy	70.		
71. Mosquito or grasshopper	71.		
72. Fly or butterfly	72.		

"Which usually goes slower, a _____ or a ____?"

73. Horse or dog	73.		
74. Car or bicycle	74.		
75. Train or rocket	75.		

"Which is heavier, a ______ or a _______?"

76. Butterfly or bird	76.		
77. Brick or shoe	77.		
78. Feather or fork	78.		

Say, "Good. Now let's try something different.
"I want you to do some things for me."

		Right	Wrong
79. Close your eyes.	79.		
80. Raise your hand.	80.		
81. Show me your teeth.	81.		
82. Show me your fingernails.	82.		
83. Wiggle.	83.		
84. Say "hello" very loudly.	84.		
85. Say "hello" very softly.	85.		
86. Stand up.	86.		
87. Turn around (all the way around).	87.		
88. Face the door.	88.		
89. Jump.	89.		
90. Sit down.	90.		

Thank the child and continue with, "I want you to think of all the things your mother gives you to eat at mealtime, and the things she gives you to eat with.

91. Name all the things you can think of." (Copy verbatim, if possible, in this space: ________

91. ____ 0 ____ 1-3 ____ 4-6 ____ 7-9 ____ 10+

If the child says nothing after 10 seconds, Say "you know like bread and forks." Stop after 30 seconds if child says nothing. Let him continue if he appears to be still thinking.

Now place the 8 crayola crayons (or any similar high intensity crayons of red, orange, yellow, green, blue, purple, brown, and black) on the table. Mix them up and line them up about 1/2 inch apart. Say "What color is this" for each (Column I). If child does not name all correctly, for those missed, say, "Give me the ____ one," (Column II). Replace the one he hands you each time.

		I. Names		II. Gives	
		Right	Wrong	Right	Wrong
92. Red	92.				
93. Yellow	93.				
94. Orange	94.				
95. Green	95.				
96. Blue	96.				
97. Purple	97.				
98. Brown	98.				
99. Black	99.				

With the crayons still on the table ask him the following questions. If he gives an incorrect answer or indicates he doesn't know, have him show you or give you the color. If he still misses, score wrong. Be certain there is a sheet of white paper in sight for the snow question.

I. "What color is ______?" II. "Show me."		I. Says		II. Pointed	
		Right	Wrong	Right	Wrong
100. Fire (red, orange, or yellow)	100.				
101. Grass	101.				
102. Snow	102.				
103. Carrot	103.				
104. The sky (blue)	104.				
105. Night (blue, black)	105.				

"Have you ever been on a swing? You know how a swing goes -- up and down and back and forth? (Accompany with gesture).

		Says		Shows	
		Right	Wrong	Right	Wrong
106. Which way does a saw go?	106.				
107. Which way does an elevator go?	107.				
108. Which way does a ferris wheel go?	108.				
109. Which way does a phonograph record go?	109.				
110. Which way does a waterfall go?	110.				

Write down in the blank exactly what the child says. Code responses as 2 (clear, correct), 1 (approximation), 0 (wrong). Mark D.K. if no response is given or the child says, "I don't know."

		"2"	"1"	Wrong	D.K.
111. When do we eat breakfast? ______	111.				
112. What day do people go to church? ______	112.				
113. What day is today? ______	113.				
114. When your mother says it's time to go to bed, what is it like outside?	114.				
115. What do we call the time of year when it's hottest?	115.				
116. What do we call the time of year when it's coldest?	116.				
117. What time of year is it now? ______	117.				
118. If your mother wanted to call up and talk to a friend, what would she use?	118.				

		"2"	"1"	Wrong	"0"
119. If you want to find a lion where would you look?	119.	____	____	____	____
120. If you wanted to buy some gas, where would you go?	120.	____	____	____	____
121. If you were sick, who would you go to?	121.	____	____	____	____
122. If you wanted to find a boat, where would you look?	122.	____	____	____	____
123. If you wanted to read something, what would you do?	123.	____	____	____	____

Take out the three cars, red, yellow, and blue; take out the three boxes, black, white and green. Be sure the black box is bottoms up. After each item, make sure all cars and all boxes are visible and available; i.e., do not leave a car in a box, etc. Give each instruction only once. Make sure he is looking and listening, and say the words slowly.

124. Put a car on a box.	124. ON ____
125. Put a car in a box.	125. IN ____
126. Put a car under a box.	126. UNDER ____
127. Put the red car on the black box.	127. RED ____ BLACK ____ ON ____
128. Put the blue car on the green box.	128. BLUE ____ ON ____ GREEN ____
129. Put the yellow car on the little box.	129. YELLOW ____ ON ____ LITTLE ____
130. Put one car in the middle-sized box.	130. ONE ____ IN ____ MID-S ____
131. Put all the cars on one side of the table and all the boxes on the other side.	131. ALL CARS ____ ONE ____ ALL BOXES ____ OTHER ____
132. Put 3 cars in the big box.	132. 3 ____ IN ____ BIG ____
133. Put 2 cars behind the box in the middle.	133. 2 ____ BEHIND ____ MIDDLE ____
134. Give everything to me.	134. All cars and all boxes ____

In this section, write down exactly what the child says. Also mark category, as indicated in the manual.

		FUNCTION		ASSOCIATION	WRONG	D.K.
		Supportive	Restrictive			
135. What does a doctor do? ____________	135.	____	____	____	____	____
136. What does a policeman do? ____________	136.	____	____	____	____	____
137. What does a dentist do? ____________	137.	____	____	____	____	____

		FUNCTION		ASSOCIATION	WRONG	D.K.
		Supportive	Restrictive			
138. What does a teacher do? ____________	138.					
139. What does a father do? ____________	139.					
140. What does a nurse do? ____________	140.					
141. What does a mother do? ____________	141.					
142. What does a soldier do? ____________	142.					

Detach the printed sheet of pictures and give it to the child. Say, "See these pictures? I'm going to draw a line from the boy to the cake, like this." Draw a line with the pencil. Hand crayon to child and say, "Now you do it." Take his hand and help him trace it, if necessary.

		Yes	No
142. Traces successfully.	143.		

After you have ascertained that the child can draw a line, say, "I want you to draw some more lines for me, one at a time. Draw a line from the ____ to the ______."

144. Bird to wagon	144.		
145. Clock to cake	145.		
146. Dog to boy	146.		
147. Girl to ball	147.		
148. Bird to other bird	148.		

TEACHER REPORT ON CHILD

(Need not be done at same time as rest of test)

	YES	NO
149. Can put on jacket or shirt without help.		
150. Can zip or button jacket.		
151. Wears shoes.		
152. Can put on shoes (if correct shoe is identified).		
153. Can put on correct shoes without help.		
154. Can tie shoes.		
155. Can carry out simple verbal instructions pertaining to clothing, food arrangements, etc. ("Go put on your jacket." "Pass the cookies to the children.")		
156. Can go about immediate home and/or school neighborhood unattended. Can get to school alone (attendant provided at major street crossings). Rural: can get to bus stop and wait without supervision.		
157. Knows meaning of red-green traffic lights. (Permissible to ask child if there is no opportunity to observe on this).		
158. Can wash hands.		
159. Can wash and dry hands and face.		
160. Notifies teacher of his toilet needs.		
161. Can care for himself in the bathroom without help: flushes, cleans, fixes clothing.		

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY Educational Testing Service TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE U.S. OFFICE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

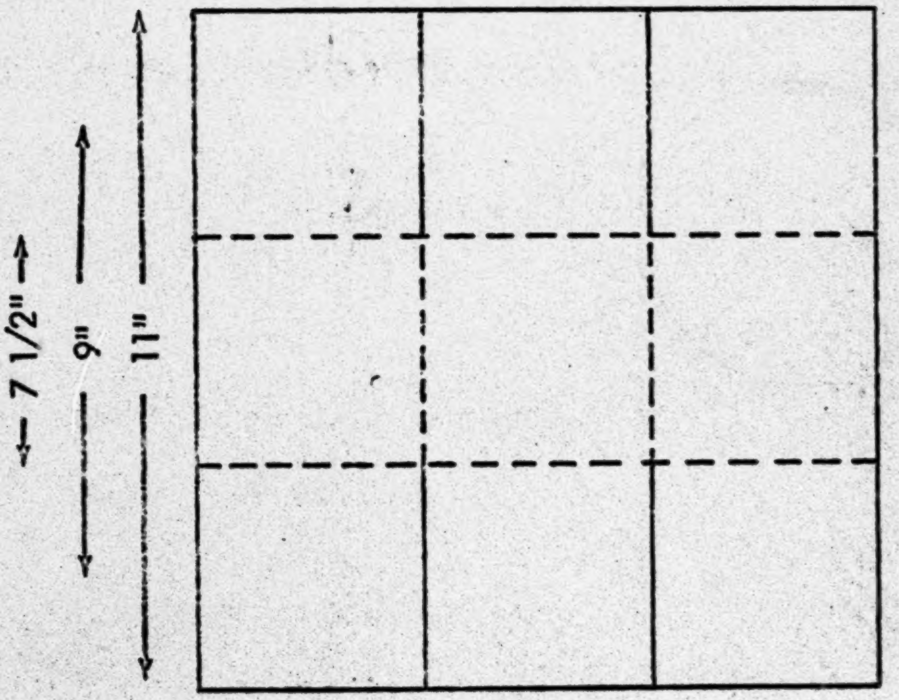
Bettye M. Caldwell, Ph.D.
Syracuse, New York
All rights reserved
© 1967 by Educational Testing Service

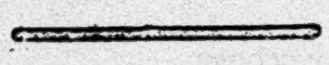
Construction of the three boxes required in items 124-134 can be a relatively simple matter. A diagram is provided below for patterns of cutting. Fold along the dotted lines and cut along the solid lines.

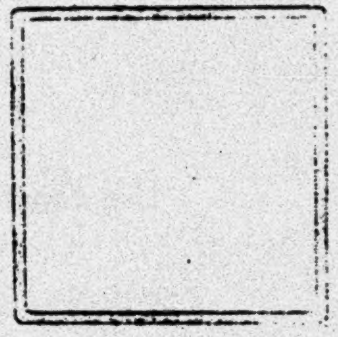
We suggest the following dimensions for the size of the paper:

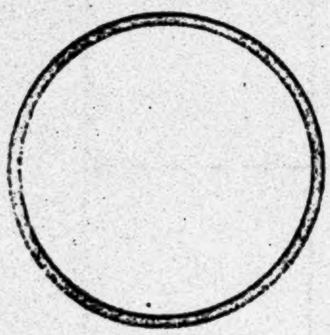
Black paper box	7 1/2 inches square
Green paper box	9 inches square
White paper box	11 inches square

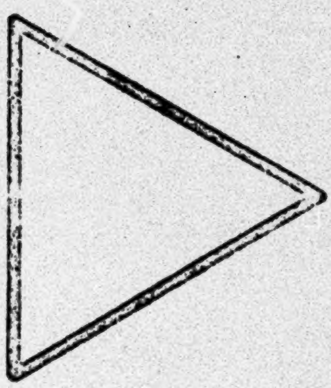
Use construction paper, which you may have to purchase.

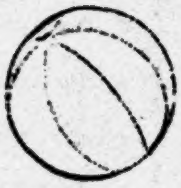


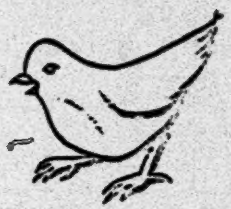


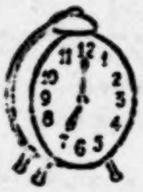


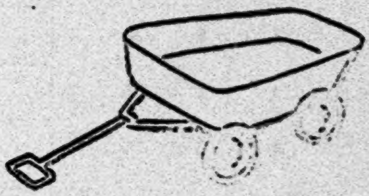


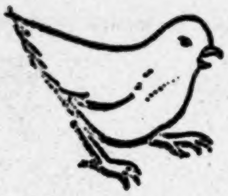


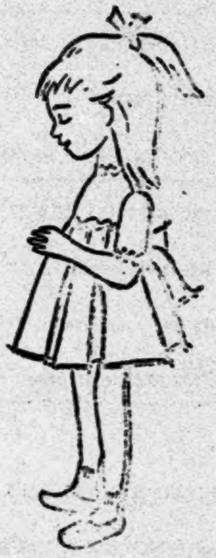


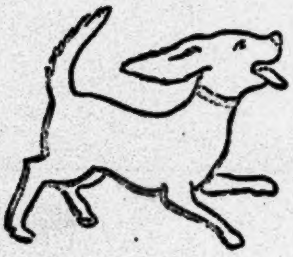


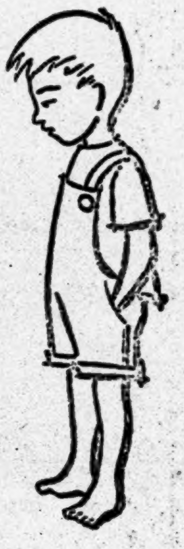


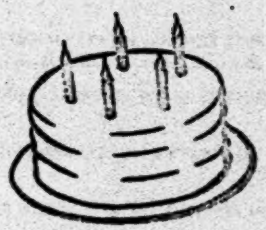












OPERATION HEAD START BEHAVIOR INVENTORY

LD'S NAME: ______________________ **SCHOOL:** ______________________

CHILD'S IDENTIFICATION NUMBER

0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐

EXAMINER IDENTIFICATION NUMBER

0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐

CENTER IDENTIFICATION NUMBER

0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐

BUDGET BUREAU NO. 116-6504
APPROVAL EXPIRES 3-31-66

INSTRUCTIONS

PLEASE DESCRIBE AS ACCURATELY AS POSSIBLE HOW THIS CHILD BEHAVES BY MARKING, WITH A NO. 2 LEAD PENCIL, ONE OF THE FOUR RESPONSES TO EACH QUESTION:

VERY MUCH LIKE   SOMEWHAT LIKE   VERY LITTLE LIKE   NOT AT ALL LIKE

PLEASE GIVE A RESPONSE TO EVERY ITEM AND BASE YOUR RESPONSE UPON YOUR PERSONAL OBSERVATION AND EXPERIENCE WITH THE CHILD.

	VERY MUCH LIKE	SOME-WHAT LIKE	VERY LITTLE LIKE	NOT AT ALL LIKE
IS USUALLY CAREFREE; RARELY BECOMES FRIGHTENED OR APPREHENSIVE.	☐	☐	☐	☐
IS SYMPATHETIC, CONSIDERATE, AND THOUGHTFUL TOWARD OTHERS.	☐	☐	☐	☐
IS EASILY DISTRACTED BY THINGS GOING ON AROUND HIM.	☐	☐	☐	☐
IS VERY SUGGESTIBLE; LETS OTHER CHILDREN BOSS HIM AROUND.	☐	☐	☐	☐
TALKS EAGERLY TO ADULTS ABOUT HIS OWN EXPERIENCES AND WHAT HE THINKS.	☐	☐	☐	☐
IS UNDULY UPSET OR DISCOURAGED IF HE MAKES A MISTAKE OR DOES NOT PERFORM WELL.	☐	☐	☐	☐
OFTEN KEEPS ALOOF FROM OTHERS BECAUSE HE IS UNINTERESTED, SUSPICIOUS, OR BASHFUL.	☐	☐	☐	☐
DEFENDS OR PRAISES HIS OWN EFFORTS.	☐	☐	☐	☐
IS CONFIDENT THAT HE CAN DO WHAT IS EXPECTED OF HIM.	☐	☐	☐	☐
IS JEALOUS; QUICK TO NOTICE AND REACT NEGATIVELY TO KINDNESS AND ATTENTION BESTOWED UPON OTHER CHILDREN.	☐	☐	☐	☐

	VERY MUCH LIKE	SOME-WHAT LIKE	VERY LITTLE LIKE	NOT AT ALL LIKE
IS METHODICAL AND CAREFUL IN THE TASKS THAT HE UNDERTAKES.	☐	☐	☐	☐
IS RARELY ABLE TO INFLUENCE OTHER CHILDREN BY HIS ACTIVITIES OR INTERESTS.	☐	☐	☐	☐
TRIES TO FIGURE OUT THINGS FOR HIMSELF BEFORE ASKING ADULTS OR OTHER CHILDREN FOR HELP.	☐	☐	☐	☐
GREATLY PREFERS THE HABITUAL AND FAMILIAR TO THE NOVEL AND THE UNFAMILIAR.	☐	☐	☐	☐
APPEARS TO TRUST IN HIS OWN ABILITIES.	☐	☐	☐	☐
HAS LITTLE RESPECT FOR THE RIGHTS OF OTHER CHILDREN; REFUSES TO WAIT HIS TURN, USURPS TOYS OTHER CHILDREN ARE PLAYING WITH, ETC.	☐	☐	☐	☐
SEEMS DISINTERESTED IN THE GENERAL QUALITY OF HIS PERFORMANCE.	☐	☐	☐	☐
RESPONDS TO FRUSTRATION OR DISAPPOINTMENT BY BECOMING AGGRESSIVE OR ENRAGED.	☐	☐	☐	☐
IS EXCESSIVE IN SEEKING THE ATTENTION OF ADULTS.	☐	☐	☐	☐
STICKS WITH A JOB UNTIL IT IS FINISHED.	☐	☐	☐	☐

PRESENT WEEK OF CENTER'S OPERATION

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9

DO NOT MARK IN THIS SPACE

☐	☐	☐	☐	☐
☐	☐	☐	☐	■
☐	■	☐	☐	☐
☐	☐	☐	☐	☐
☐	☐	☐	☐	☐

OVER

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY Edward Zigler
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE U.S. OFFICE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

by Edward Zigler, 1965

OPERATION HEAD START BEHAVIOR INVENTORY

22

IBMH92217

	VERY MUCH LIKE	SOME-WHAT LIKE	VERY LITTLE LIKE	NOT AT ALL LIKE
1. GOES ABOUT HIS ACTIVITIES WITH A MINIMUM OF ASSISTANCE FROM OTHERS.	☐	☐	☐	☐
2. IS CONSTRICTED, INHIBITED, OR TIMID; NEEDS TO BE URGED BEFORE ENGAGING IN ACTIVITIES.	☐	☐	☐	☐
3. IS EVEN-TEMPERED, IMPERTURBABLE; IS RARELY ANNOYED OR CROSS.	☐	☐	☐	☐
4. IS RELUCTANT TO TALK TO ADULTS; RESPONDS VERBALLY ONLY WHEN URGED.	☐	☐	☐	☐
25. WORKS EARNESTLY AT HIS CLASSWORK OR PLAY; DOESN'T TAKE IT LIGHTLY.	☐	☐	☐	☐
26. IS OFTEN QUARRELSOME WITH CLASSMATES FOR MINOR REASONS.	☐	☐	☐	☐
27. DOES NOT NEED ATTENTION OR APPROVAL FROM ADULTS TO SUSTAIN HIM IN HIS WORK OR PLAY.	☐	☐	☐	☐
28. WHEN FACED WITH A DIFFICULT TASK, HE EITHER DOES NOT ATTEMPT IT OR GIVES UP VERY QUICKLY.	☐	☐	☐	☐
29. DOESN'T LIKE TO BE INTERRUPTED WHEN ENGAGED IN DEMANDING ACTIVITIES, E. G., PUZZLES, PAINTING, CONSTRUCTING THINGS.	☐	☐	☐	☐
30. WELCOMES CHANGES AND NEW SITUATIONS; IS VENTURESOME, EXPLORES, AND GENERALLY ENJOYS NOVELTY.	☐	☐	☐	☐

	VERY MUCH LIKE	SOME-WHAT LIKE	VERY LITTLE LIKE	NOT AT ALL LIKE
31. CALMLY SETTLES DIFFICULTIES THAT ARISE WITHOUT APPEAL TO ADULTS OR OTHERS.	☐	☐	☐	☐
32. IS RELUCTANT TO USE IMAGINATION; TENDS NOT TO ENJOY "MAKE-BELIEVE" GAMES.	☐	☐	☐	☐
33. LIKES TO TALK WITH OR SOCIALIZE WITH TEACHER.	☐	☐	☐	☐
34. OFTEN WILL NOT ENGAGE IN ACTIVITIES UNLESS STRONGLY ENCOURAGED.	☐	☐	☐	☐
35. IS EAGER TO INFORM OTHER CHILDREN OF THE EXPERIENCES HE HAS HAD.	☐	☐	☐	☐
36. EMOTIONAL RESPONSE IS CUSTOMARILY VERY STRONG; OVER-RESPONDS TO USUAL CLASSROOM PROBLEMS, FRUSTRATIONS, AND DIFFICULTIES.	☐	☐	☐	☐
37. IS UNCOOPERATIVE IN GROUP ACTIVITIES.	☐	☐	☐	☐
38. IS USUALLY POLITE TO ADULTS; SAYS "PLEASE," "THANK YOU," ETC.	☐	☐	☐	☐
39. ASKS MANY QUESTIONS FOR INFORMATION ABOUT THINGS, PERSONS, ETC. (EMPHASIS HERE SHOULD BE ON QUESTIONS PROMPTED BY GENUINE CURIOSITY RATHER THAN BIDS FOR ATTENTION.)	☐	☐	☐	☐
40. USUALLY DOES WHAT ADULTS ASK HIM TO DO.	☐	☐	☐	☐

	VERY MUCH LIKE	SOME-WHAT LIKE	VERY LITTLE LIKE	NOT AT ALL LIKE
41. REQUIRES THE COMPANY OF OTHER CHILDREN; FINDS IT DIFFICULT TO WORK OR PLAY BY HIMSELF.	☐	☐	☐	☐
42. RESPONDS TO FRUSTRATION OR DISAPPOINTMENT BY BECOMING SULLEN, WITHDRAWN, OR SULKY.	☐	☐	☐	☐
43. DEMONSTRATES IMAGINATIVENESS AND CREATIVITY IN HIS USE OF TOYS AND PLAY MATERIALS.	☐	☐	☐	☐
44. INSISTS ON MAINTAINING HIS RIGHTS, E. G., WILL NOT YIELD HIS PLACE AT PAINTING, OR AT THE CARPENTRY BENCH, ETC.; INSISTS ON GETTING HIS TURN ON THE SLIDE OR IN GROUP GAMES, ETC.	☐	☐	☐	☐
45. IS WANTED AS A PLAYMATE BY OTHER CHILDREN.	☐	☐	☐	☐
46. IS LETHARGIC OR APATHETIC; HAS LITTLE ENERGY OR DRIVE.	☐	☐	☐	☐
47. HAS A TENDENCY TO DISCONTINUE ACTIVITIES AFTER EXERTING A MINIMUM OF EFFORT.	☐	☐	☐	☐
48. IS GENERALLY A HAPPY CHILD.	☐	☐	☐	☐
49. APPROACHES NEW TASKS TIMIDLY AND WITHOUT ASSURANCE; SHRINKS FROM TRYING NEW THINGS.	☐	☐	☐	☐
50. WHAT HE DOES IS OFTEN IMITATED BY OTHER CHILDREN.	☐	☐	☐	☐

DO NOT MARK IN THIS SPACE

☐	☐	☐	●	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐	☐	☐	●
☐	☐	☐	☐	☐	☐	●	☐	☐	☐
☐	☐	●	☐	☐	☐	☐	☐	☐	☐
☐	●	☐	☐	☐	☐	☐	☐	☐	☐

2220

PSYCHOLOGICAL SCREENING PROCEDURE

BUDGET BUREAU NO. 116-6506
APPROVAL EXPIRES 6-30-66

LD'S NAME: ____________________

CHILD'S IDENTIFICATION NUMBER

0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐

EXAMINER'S IDENTIFICATION NUMBER

0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐

CENTER IDENTIFICATION NUMBER

0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ | 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐

PRESENT WEEK OF CENTER'S OPERATION

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9

PLEASE USE A NO. 2 LEAD PENCIL TO MARK THIS FORM

PSYCHOLOGICAL SCREENING PROCEDURES ARE MUCH LIKE GENERAL PHYSICAL EXAMINATIONS, EXCEPT THAT THEY ARE INTENDED TO REVEAL MENTAL RATHER THAN PHYSICAL SYMPTOMS. TWO SUCH PROCEDURES HAVE BEEN INCORPORATED INTO OPERATION HEAD START, A SYMPTOM CHECKLIST AND A CHILD DESCRIPTION CHECKLIST. BOTH SHOULD BE COMPLETED BY THE HEAD TEACHER AFTER SHE HAS BEEN ACQUAINTED WITH HER PUPILS FOR AT LEAST FOUR WEEKS.

1. SYMPTOM CHECKLIST

MARK EACH OF THE BEHAVIORS LISTED IN THIS SECTION WHICH HAVE CHARACTERIZED THIS CHILD'S BEHAVIOR THROUGHOUT HIS ATTENDANCE IN YOUR CLASS. IF A BEHAVIOR OCCURRED ONLY ONCE OR TWICE DO NOT MARK IT.

☐ 1. SELFISH OR GREEDY HOARDING OF OWN AND OTHER CHILDREN'S PLAYTHINGS OR CLASSROOM MATERIALS.
☐ 2. REFUSES TO EAT OR DRINK.
☐ 3. HOLDS BREATH UNTIL LOSES TYPICAL COLORING OR UNTIL DIZZY OR FAINT.
☐ 4. TEMPER TANTRUM IN WHICH THROWS SELF ABOUT OR DOWN, CRIES, SCREAMS, HITS FLOOR, ETC.
☐ 5. TEMPER TANTRUM IN WHICH VIOLENTLY ATTACKS OTHER CHILDREN OR ADULTS OR DESTROYS PROPERTY.
☐ 6. BANGS HEAD AGAINST HARD OBJECT, BITES HIMSELF, SCRATCHES HIMSELF, PULLS OUT OWN HAIR, OR OTHERWISE ABUSES SELF.
☐ 7. BITES OTHER CHILDREN OR ADULTS IN ANGER.
☐ 8. PLACES FOREIGN OBJECTS IN SOME BODY OPENING OTHER THAN THE MOUTH; FOR EXAMPLE, ROCKS IN EARS, PENCIL IN NOSE.
☐ 9. STUTTERS OR STAMMERS TO POINT THAT IT IS DIFFICULT TO UNDERSTAND HIM.
☐ 10. FAINTS OR PASSES OUT.
☐ 11. COMPLAINS OF PAINS IN HEAD OR STOMACH.
☐ 12. INTERESTED IN ONLY ONE OR TWO OBJECTS OR ACTIVITIES. REFUSES TO PARTICIPATE OR SEEMS DISINTERESTED IN OTHER THINGS OR ACTIVITIES.
☐ 13. CRIES EXCESSIVELY OR BECOMES VERY ANXIOUS OR WITHDRAWN WHEN MILDLY REPRIMANDED.
☐ 14. FREQUENTLY WANDERS OR RUNS AWAY FROM NURSERY.
☐ 15. WILL NOT FEED SELF.
☐ 16. ALMOST CONSTANT THUMB-SUCKING.
☐ 17. EXCESSIVE CLINGING TO SOME OBJECT (BLANKET, CLOTH, SOFT ANIMAL, OR OTHER TOY).
☐ 18. ASKS TO BE CALLED BY SOME NAME OTHER THAN OWN AND REFUSES TO ANSWER TO OWN NAME.
☐ 19. NEEDS EXCESSIVE PROMPTING AND CONSTANT REASSURANCE TO TRY SOMETHING NEW; BECOMES VERY ANXIOUS IN NEW SITUATIONS.
☐ 20. CONSTANTLY CRITICIZES SELF AND OWN PRODUCTIONS.
☐ 21. OFTEN CRIES OR LAUGHS SUDDENLY FOR NO APPARENT REASON.
☐ 22. SHOWS NO INTEREST IN PLAYING WITH OR BEING ACCEPTED BY OTHER CHILDREN.
☐ 23. CANNOT COMMUNICATE WITH SPOKEN LANGUAGE.
☐ 24. OFTEN SITS ROCKING BACK AND FORTH.
☐ 25. SAD OR FRIGHTENED FOR MOST OF THE DAY.
☐ 26. AUDIBLE CLAMPING OR GRINDING OF TEETH.
☐ 27. FEAR OF URINATING OR MOVING BOWELS.
☐ 28. COMPLETE INABILITY TO INTERACT WITH STRANGERS.

☐ 29. UNABLE TO REMAIN SEATED FOR MORE THAN FIVE MINUTES AT A TIME (AS WHEN EATING OR BEING READ TO).

OVER

☐ 30. SEVERAL WEEKS AFTER INITIAL PARTICIPATION IN OPERATION HEAD START, STILL CRIES OR BECOMES DEPRESSED WHEN MOTHER LEAVES.

DO NOT MARK IN THIS SPACE

☐	☐	☐	☐	☐	☐	☐	☐	☐	●
☐	☐	☐	☐	☐	☐	☐	☐	☐	●
☐	☐	☐	☐	☐	☐	☐	●	☐	☐
☐	☐	☐	☐	☐	☐	☐	●	☐	☐
☐	●	☐	☐	☐	☐	☐	☐	☐	☐

CAP-HS FORM 40 JUN. '65

92221

PSYCHOLOGICAL SCREENING PROCEDURE

24

CHILD DESCRIPTION CHECKLIST READ EACH DESCRIPTION CAREFULLY AND PUT A MARK BESIDE ANY THAT FIT THIS CHILD REASONABLY WELL. IT IS RECOGNIZED THAT DESCRIPTIONS OF THIS SORT DO NOT DO JUSTICE TO THE WHOLE CHILD AND THAT NO CHILD WILL FIT ANY DESCRIPTION EXACTLY. JUST PLACE A MARK BESIDE THE DESCRIPTIONS THAT FIT THIS CHILD REASONABLY WELL. THESE DESCRIPTIONS ARE NOT MUTUALLY EXCLUSIVE. IT IS POSSIBLE THAT SOME CHILDREN WILL FIT TWO OR MORE OF THEM. ALSO, THERE WILL BE MANY CHILDREN WHO DO NOT FIT ANY OF THESE DESCRIPTIONS. IT IS POSSIBLE THAT IN SOME CLASSES THERE WILL BE NO CHILD TO FIT ANY OF THE DESCRIPTIONS. FEW PROFESSIONAL PEOPLE, NO MATTER HOW WELL TRAINED, CAN MAKE THIS KIND OF RATING WITH ABSOLUTE CERTAINTY AND COMPLETE COMFORT. DON'T SPEND TOO MUCH TIME WORRYING WHETHER A PARTICULAR CHILD REALLY DOES OR DOESN'T FIT THE DESCRIPTIONS. MAKE YOUR BEST JUDGEMENT FOR EACH CHILD ON EACH DESCRIPTION AND THEN GO ON TO THE NEXT.

☐ 1. **THE DISRUPTIVE CHILD** THE DISRUPTIVE CHILD IS ONE WHO DISTURBS THE ACTIVITIES AND PLAY OF OTHER CHILDREN. HE MAY DO THIS BY PUSHING OR TEASING CHILDREN WHO ARE ENGAGED IN ACTIVITIES OR BY SNATCHING OR OTHERWISE DISTURBING THE MATERIALS WITH WHICH OTHER CHILDREN ARE PLAYING.

☐ 2. **THE PROVOCATIVE CHILD** THE PROVOCATIVE CHILD IS ONE WHO DELIBERATELY TRIES TO IRRITATE THE TEACHER. HE ATTEMPTS TO SECURE THE TEACHER'S ATTENTION BY DOING THINGS WHICH ARE PROHIBITED OR WHICH HE SHOULD KNOW THAT THE TEACHER DISLIKES. HE MAY REFUSE TO GO ALONG WITH GROUP ACTIVITIES, HE MAY CURSE OR OTHERWISE INSULT THE TEACHER, HE MAY DAMAGE OR DESTROY CLASSROOM MATERIALS, ETC. THIS CHILD DOES NOT RESPOND TO PUNISHMENTS BY "BEING BETTER."

☐ 3. **THE ISOLATED CHILD** THE ISOLATED CHILD NEVER SEEMS TO PLAY WITH OTHER PUPILS. HE DOESN'T SEEM TO BE ABLE TO INITIATE CONTACT WITH OTHER CHILDREN; THEY SEEM TO IGNORE HIM AND HE THEM. OTHER CHILDREN DO NOT INCLUDE HIM IN GROUP ACTIVITIES AND HE DOES NOT SEEM TO CARE.

☐ 4. **THE FEARFUL OR TEARFUL CHILD** THE FEARFUL CHILD IS EXCESSIVELY TIMID. HE CRIES MORE OFTEN THAN THE OTHER CHILDREN. OFTEN HE CRIES FOR NO APPARENT REASON. HE SEEMS TO WANT TO PLAY WITH OTHER CHILDREN AND DO THE THINGS WHICH ARE "FUN", BUT HIS FEARFULNESS GETS IN THE WAY. HE MAY BE SOMETHING OF A "TATTLE TALE," A "WHINER," OR A "MOTHER'S BOY (GIRL)."

☐ 5. **THE SILENT CHILD** THE SILENT CHILD NEVER TALKS. HE WILL USE GESTURES OR SIGNS RATHER THAN WORDS. HE SEEMS TO UNDERSTAND WHAT OTHER PEOPLE SAY, BUT HE WON'T RESPOND VERBALLY UNLESS REALLY URGED.

☐ 6. **THE CHILD WHO DOESN'T LEARN** THE CHILD WHO DOESN'T LEARN NEVER SEEMS TO GET ANY BETTER AT WHAT HE IS BEING TAUGHT. HE MAY TRY HARD, BUT HE DOESN'T SEEM TO IMPROVE. HE MAY HAVE DIFFICULTY UNDERSTANDING WHAT HE IS TOLD, AND MAY HAVE TO HAVE THINGS REPEATED A NUMBER OF TIMES. HE DOESN'T SEEM TO BE AS QUICK OR ALERT AS THE OTHER CHILDREN. OFTEN, HE SEEMS IMMATURE FOR HIS AGE.

☐ 7. **THE CHILD WITH SEPARATION PROBLEMS** THE CHILD WITH SEPARATION PROBLEMS SEEMS TO GET ALONG WELL MOST OF THE TIME, BUT HE HAS GREAT DIFFICULTY EARLY IN THE SCHOOL DAY. HIS DIFFICULTIES MAY BE MOST MARKED DURING THE FIRST DAYS OF NURSERY SCHOOL AND AFTER WEEKENDS OR VACATIONS. EARLY IN THE DAY, HE MAY SAY THAT HE DOESN'T WANT TO LEAVE HIS MOTHER OR THAT HE WANTS TO GO HOME TO HIS MOTHER. LATER ON, HE SETTLES DOWN AND SEEMS TO DO FINE. THIS CHILD'S MOTHER MAY COME TO THE CLASSROOM WITH THE CHILD MORE FREQUENTLY THAN OTHERS MOTHERS AND MAY TALK TO THE TEACHER QUITE OFTEN ABOUT HOW DIFFICULT THINGS ARE FOR HER CHILD.

☐ 8. **THE UNHAPPY CHILD** THE UNHAPPY CHILD IS ALWAYS "DOWN-AT-THE-MOUTH." HE DOESN'T SMILE VERY OFTEN AND SEEMS TO LACK A "JOY FOR LIFE." HE MIGHT NOT CRY VERY OFTEN, BUT HE DOESN'T APPEAR TO ENJOY HIMSELF OR THE THINGS THAT ARE GOING ON AROUND HIM.

☐ 9. **THE HYPERACTIVE CHILD** THIS IS A CHILD WHO JUST CAN'T SIT STILL. HE MAY ROAM AIMLESSLY ABOUT THE ROOM. IF HE IS DISRUPTIVE OF OTHER CHILDREN'S ACTIVITIES IT IS MORE AN ACCIDENTAL RESULT OF HIS RUNNING ABOUT, THAN A DELIBERATE AGGRESSIVENESS. SOME HYPERACTIVE CHILDREN DON'T ROAM AROUND A GREAT DEAL. RATHER, THEY OCCUPY THEMSELVES WITH STRANGE MOTOR ACTIVITIES SUCH AS SHAKING THEIR HANDS OR WAVING THEIR FINGERS BEFORE THEIR EYES, PULLING AT THEIR EARS OR OTHER BODY PARTS, ROCKING BACK AND FORTH. THIS TYPE OF CHILD IS OFTEN EXTREMELY DISTRACTIBLE.

II. REFERRAL OR TREATMENT REPORT ON THE BASIS OF THE BEHAVIORS NOTED ABOVE OR ANY OTHER FACTORS, WAS THIS CHILD REFERRED TO, TREATED AT, OR PLACED INTO ANY OF THE FOLLOWING:

	YES	NO		YES	NO
1. CHILD GUIDANCE CLINIC	☐	☐	8. HOME FOR DEPENDENT CHILDREN	☐	☐
2. MENTAL HEALTH CENTER	☐	☐	9. OTHER (SEE BELOW)	☐	☐
3. PUBLIC HEALTH NURSE OR PHYSICIAN	☐	☐	10. IF REFERRAL WAS MADE, WAS THE CHILD DIAGNOSED AS ABNORMAL?	☐	☐
4. HOSPITAL OR MEDICAL CLINIC	☐	☐	11. IF REFERRAL WAS MADE, WAS TREATMENT INITIATED?	☐	☐
5. STATE SCHOOL FOR THE MENTALLY RETARDED	☐	☐			
6. HOSPITAL FOR THE EMOTIONALLY DISTURBED	☐	☐			
7. FOSTER HOME	☐	☐			

DO NOT MARK IN THIS SPACE

☐	☐	☐	☐	☐	☐	☐	☐	☐	☒
☐	☐	☐	☐	☐	☐	☐	☐	☐	☒
☐	☐	☐	☐	☐	☐	☐	☒	☐	☐
☐	☐	☐	☐	☐	☐	☐	☒	☐	☐
☐	☒	☐	☐	☐	☐	☐	☐	☐	☐

PLEASE SPECIFY "OTHER", REFERRAL OR TREATMENT

____

OPERATION HEAD START STAFF MEMBER INFORMATION SHEET

BUDGET BUREAU NO. 116-R026
APPROVAL EXPIRES 6-1-66

CENTER IDENTIFICATION NUMBER

0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐

STAFF IDENTIFICATION NUMBER

0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐

PLEASE USE A NO. 2 PENCIL TO MARK THIS FORM

1. AGE UNDER 16 ☐ 16-21 ☐ 21-30 ☐ 31-45 ☐ 46-60 ☐ OVER 60 ☐

2. RACE NEGRO ☐ WHITE ☐ ORIENTAL ☐
CULTURAL BACKGROUND AMERICAN INDIAN ☐ MEXICAN ☐ PUERTO RICAN ☐ FRENCH CREOLE ☐ ESKIMO ☐ OTHER ☐

3. SEX MALE ☐ FEMALE ☐

4. HIGHEST LEVEL OF EDUCATION COMPLETED

	NUMBER OF YEARS COMPLETED			GRADUATED	
				YES	NO
ELEMENTARY SCHOOL	1-4 ☐	5-7 ☐		☐	☐
HIGH SCHOOL	1-2 ☐	3-4 ☐		☐	☐
COLLEGE	1-2 ☐	3-4 ☐		☐	☐
GRADUATE SCHOOL			MA.	☐	☐
			Ph.D	☐	☐

5. YOUR POSITION IN THE CHILD DEVELOPMENT CENTER
PROFESSIONAL (TEACHER, NURSE, PSYCHOLOGIST, ETC.) ☐
NEIGHBORHOOD RESIDENT PAID ☐ VOLUNTEER ☐
OTHER VOLUNTEER ☐

6. WHAT IS YOUR USUAL FAMILY INCOME PER YEAR ?
UNDER $1000 ☐ $1000 TO $1999 ☐ $2000 TO $2999 ☐ $3000 TO $3999 ☐ $4000 TO $4999 ☐ $5000 TO $5999 ☐ $6000 TO $7999 ☐ $8000 TO $9999 ☐ $10,000 PLUS ☐

7. PREVIOUS TO HEAD START, HOW LONG HAD YOU WORKED WITH GROUPS OF CHILDREN FROM CONDITIONS OF POVERTY? NOT AT ALL ☐ 1-3 YEARS ☐ 3-5 YEARS ☐ OVER 5 YEARS ☐

8. PREVIOUS TO HEAD START, HOW MUCH EXPERIENCE HAD YOU HAD WITH PRESCHOOLERS? NONE ☐ 1-3 YEARS ☐ 3-5 YEARS ☐ OVER 5 YEARS ☐

9. DO YOU SPEAK FLUENTLY ANY LANGUAGE OTHER THAN ENGLISH? YES ☐ NO ☐

10. IS THIS LANGUAGE USED WITH THE CHILDREN IN THE PROGRAM? YES ☐ NO ☐

11. DID YOU ATTEND AN NUEA TRAINING SESSION? YES ☐ NO ☐

CAP-HS FORM 41 JUN. '65 IBM H92224

24

IBMH9221B

PAID AND VOLUNTARY WORKER'S EVALUATION OF OPERATION HEAD START

CENTER IDENTIFICATION NUMBER

0 ☐	1 ☐	2 ☐	3 ☐	4 ☐	☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
0 ☐	1 ☐	2 ☐	3 ☐	4 ☐	☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
0 ☐	1 ☐	2 ☐	3 ☐	4 ☐	☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
0 ☐	1 ☐	2 ☐	3 ☐	4 ☐	☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
0 ☐	1 ☐	2 ☐	3 ☐	4 ☐	☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
0 ☐	1 ☐	2 ☐	3 ☐	4 ☐	☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
0 ☐	1 ☐	2 ☐	3 ☐	4 ☐	☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐

PLEASE USE A NO. 2 LEAD PENCIL TO MARK THIS SHEET.

WORKER'S IDENTIFICATION NUMBER

0 ☐	1 ☐	2 ☐	3 ☐	4 ☐	☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
0 ☐	1 ☐	2 ☐	3 ☐	4 ☐	☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
0 ☐	1 ☐	2 ☐	3 ☐	4 ☐	☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
0 ☐	1 ☐	2 ☐	3 ☐	4 ☐	☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
0 ☐	1 ☐	2 ☐	3 ☐	4 ☐	☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐
0 ☐	1 ☐	2 ☐	3 ☐	4 ☐	☐	5 ☐	6 ☐	7 ☐	8 ☐	9 ☐

BUDGET BUREAU NO. 116-6808
APPROVAL EXPIRES 6-30-66

	VERY GOOD	GOOD	FAIR	POOR	CAN'T EVAL
1. THE GENERAL MORALE OF TEACHER, TEACHER'S AIDES, AND VOLUNTEERS WAS:	☐	☐	☐	☐	☐
2. HOW REALISTIC WAS YOUR DAILY SCHEDULE?	☐	☐	☐	☐	☐
3. WERE THERE ENOUGH WORKERS TO CARRY OUT GOALS OF THE PROGRAM?	☐	☐	☐	☐	☐
4. WAS THE CURRICULUM WITH WHICH YOU WORKED RELEVANT TO THIS AGE CHILD?	☐	☐	☐	☐	☐
5. COOPERATION FROM THE PARENTS WAS:	☐	☐	☐	☐	☐
6. THE FACILITIES (SUCH AS LIGHTING, SPACE, WATER, STORAGE, BATHROOMS, ETC.) OF THE PRESCHOOL AREA WERE:	☐	☐	☐	☐	☐
7. THE AMOUNT OF AVAILABLE PLAY MATERIALS WAS:	☐	☐	☐	☐	☐
8. THE QUALITY OF AVAILABLE PLAY MATERIALS WAS:	☐	☐	☐	☐	☐
9. HOW ADEQUATE WAS THE PHYSICAL MAINTENANCE OF THE PRESCHOOL AREA?	☐	☐	☐	☐	☐
10. THE QUALITY OF THE TEACHING SUPERVISION WAS:	☐	☐	☐	☐	☐
11. HOW HELPFUL TO YOUR TEACHING WERE THE PSYCHOLOGICAL MEASURES AND RATINGS YOU COMPLETED?	☐	☐	☐	☐	☐
12. HOW ADEQUATE WERE THE TRANSPORTATION ARRANGEMENTS, WHERE NEEDED, FOR CHILDREN AND PARENTS?	☐	☐	☐	☐	☐
13. HOW AVAILABLE WERE MEDICAL AND/OR DENTAL SERVICES?	☐	☐	☐	☐	☐
14. HOW AVAILABLE WERE SPECIAL-EDUCATION FACILITIES?	☐	☐	☐	☐	☐
15. HOW AVAILABLE WERE PSYCHOLOGICAL AND/OR PSYCHIATRIC SERVICES?	☐	☐	☐	☐	☐
16. HOW AVAILABLE WERE SOCIAL SERVICE AGENCIES?	☐	☐	☐	☐	☐
17. HOW ADEQUATE WAS THE AMOUNT OF TIME SET ASIDE FOR PARENT-TEACHER CONFERENCES?	☐	☐	☐	☐	☐

18. IN RESPECT TO THE PHYSICAL AND PSYCHOLOGICAL HEALTH OF THE CHILD AND HIS EDUCATIONAL DEVELOPMENT, MY ATTITUDES TOWARD THE FOLLOWING ARE:

	VERY MUCH WORTHWHILE	WORTHWHILE	OCCASIONALLY WORTHWHILE	WASTE OF TIME	NOT APPLICABLE
1. MEDICAL EXAMINATION	☐	☐	☐	☐	☐
2. DENTAL EXAMINATION	☐	☐	☐	☐	☐
3. OPPORTUNITY TO ATTEND SCHOOL AT AN EARLY AGE	☐	☐	☐	☐	☐
4. INCREASED EXPERIENCE WITH A VARIETY OF TOYS AND GAMES	☐	☐	☐	☐	☐
5. INCREASED EXPERIENCE WITH A VARIETY OF BOOKS, STORIES, AND MUSIC	☐	☐	☐	☐	☐
6. TRIPS INTO THE COMMUNITY	☐	☐	☐	☐	☐
7. INDIVIDUAL ATTENTION GIVEN TO EACH CHILD BY TEACHER AND AIDES	☐	☐	☐	☐	☐
8. OPPORTUNITY TO PARTICIPATE IN GROUP ACTIVITIES WITH OTHER CHILDREN	☐	☐	☐	☐	☐

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY Edward Zigler

TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE U.S. OFFICE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

DO NOT MARK IN THIS SPACE

☐	■	☐	☐	☐	☐	☐	☐	☐	☐
■	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	■	☐	☐	☐
☐	☐	☐	☐	☐	■	☐	☐	☐	☐
☐	☐	☐	☐	☐	■	☐	☐	☐	☐

© by Edward Zigler, 1965

CAP-HS FORM 38 JUN. '65

MN92219

PAID AND VOLUNTARY WORKER'S EVALUATION OF OPERATION HEAD START

19. I FEEL THAT, IN GENERAL, CHILDREN ATTENDING THE OPERATION HEAD START PROGRAM WERE CHANGED IN THE FOLLOWING WAYS:

	MUCH BETTER	BETTER	NO CHANGE	WORSE	MUCH WORSE
1. GETTING ALONG WITH OTHER CHILDREN	☐	☐	☐	☐	☐
2. SELF-CONFIDENCE	☐	☐	☐	☐	☐
3. SPEAKING ABILITY	☐	☐	☐	☐	☐
4. EVERYDAY MANNERS	☐	☐	☐	☐	☐
5. FINISHING WHAT HE STARTS	☐	☐	☐	☐	☐
6. DOING WHAT HE'S TOLD	☐	☐	☐	☐	☐
7. INTERESTED IN NEW THINGS	☐	☐	☐	☐	☐
8. CAN DO THINGS ON HIS OWN	☐	☐	☐	☐	☐
9. CHANCES OF SUCCESS IN KINDERGARTEN ARE:	☐	☐	☐	☐	☐

20. AS A RESULT OF THEIR CONTACT WITH OPERATION HEAD START, THE PARENTS ARE:

	MUCH BETTER	BETTER	NO CHANGE	WORSE	MUCH WORSE
1. INVOLVED WITH CHILD'S EDUCATION	☐	☐	☐	☐	☐
2. CONCERNED ABOUT OWN APPEARANCE	☐	☐	☐	☐	☐
3. PARTICIPATING IN COMMUNITY ACTIVITIES	☐	☐	☐	☐	☐
4. AWARE OF ENLIGHTENED CHILD-REARING PRACTICES	☐	☐	☐	☐	☐
5. EFFECTIVE IN INTERPERSONAL RELATIONS	☐	☐	☐	☐	☐
6. KNOWLEDGEABLE ABOUT COMMUNITY RESOURCES	☐	☐	☐	☐	☐

21. AS A RESULT OF MY CONTACT WITH OPERATION HEAD START,

	MUCH MORE	MORE	A LITTLE	NOT AT ALL
1. I AM KNOWLEDGEABLE ABOUT TEACHING CHILDREN OF THIS AGE	☐	☐	☐	☐
2. I AM AWARE OF THE ENVIRONMENT THESE CHILDREN EXPERIENCE	☐	☐	☐	☐
3. I HAVE ACQUIRED NEW TECHNIQUES TO INTERACT EFFECTIVELY WITH THESE CHILDREN	☐	☐	☐	☐
4. I AM KNOWLEDGEABLE ABOUT AND HAVE THE ABILITY TO DEAL WITH OTHER PROFESSIONAL WORKERS CONCERNED WITH THE CHILD'S PHYSICAL, PSYCHOLOGICAL, AND SOCIAL DEVELOPMENT	☐	☐	☐	☐

	A GREAT DEAL	SOME-WHAT	A LITTLE	NOT AT ALL
22. HOW MUCH DID YOU ENJOY YOUR DUTIES WITH OPERATION HEAD START?	☐	☐	☐	☐
23. WOULD YOU LOOK FORWARD TO PARTICIPATING IN OPERATION HEAD START NEXT YEAR?	☐	☐	☐	☐

24. ADD HERE ANY COMMENTS THAT YOU WOULD LIKE TO MAKE:

DO NOT MARK IN THIS SPACE

☐	■	☐	☐	☐	☐	☐	☐	☐	☐
■	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	■	☐	☐	☐
☐	☐	☐	☐	☐	■	☐	☐	☐	☐
☐	☐	☐	☐	☐	■	☐	☐	☐	☐

2d

OPERATION HEAD START WORKER'S ATTITUDE SCALE

IBMH92214

BUDGET BUREAU NO. 116-6504
APPROVAL EXPIRES 3-31-66

WORKER'S IDENTIFICATION NUMBER

0 ::::: 1 ::::: 2 ::::: 3 ::::: 4 ::::: ☐ 5 ::::: 6 ::::: 7 ::::: 8 ::::: 9 :::::
0 ::::: 1 ::::: 2 ::::: 3 ::::: 4 ::::: ☐ 5 ::::: 6 ::::: 7 ::::: 8 ::::: 9 :::::
0 ::::: 1 ::::: 2 ::::: 3 ::::: 4 ::::: ☐ 5 ::::: 6 ::::: 7 ::::: 8 ::::: 9 :::::
0 ::::: 1 ::::: 2 ::::: 3 ::::: 4 ::::: ☐ 5 ::::: 6 ::::: 7 ::::: 8 ::::: 9 :::::
0 ::::: 1 ::::: 2 ::::: 3 ::::: 4 ::::: ☐ 5 ::::: 6 ::::: 7 ::::: 8 ::::: 9 :::::
0 ::::: 1 ::::: 2 ::::: 3 ::::: 4 ::::: ☐ 5 ::::: 6 ::::: 7 ::::: 8 ::::: 9 :::::

CENTER IDENTIFICATION NUMBER

0 ::::: 1 ::::: 2 ::::: 3 ::::: 4 ::::: ☐ 5 ::::: 6 ::::: 7 ::::: 8 ::::: 9 :::::
0 ::::: 1 ::::: 2 ::::: 3 ::::: 4 ::::: ☐ 5 ::::: 6 ::::: 7 ::::: 8 ::::: 9 :::::
0 ::::: 1 ::::: 2 ::::: 3 ::::: 4 ::::: ☐ 5 ::::: 6 ::::: 7 ::::: 8 ::::: 9 :::::
0 ::::: 1 ::::: 2 ::::: 3 ::::: 4 ::::: ☐ 5 ::::: 6 ::::: 7 ::::: 8 ::::: 9 :::::
0 ::::: 1 ::::: 2 ::::: 3 ::::: 4 ::::: ☐ 5 ::::: 6 ::::: 7 ::::: 8 ::::: 9 :::::
0 ::::: 1 ::::: 2 ::::: 3 ::::: 4 ::::: ☐ 5 ::::: 6 ::::: 7 ::::: 8 ::::: 9 :::::
0 ::::: 1 ::::: 2 ::::: 3 ::::: 4 ::::: ☐ 5 ::::: 6 ::::: 7 ::::: 8 ::::: 9 :::::

PLEASE USE A NO. 2 LEAD PENCIL

PART I

THE FOLLOWING STATEMENTS HAVE NO RIGHT OR WRONG ANSWERS. ALL THAT IS REQUIRED IS THAT YOU GIVE YOUR HONEST REACTION TO EACH QUESTION. AFTER READING EACH STATEMENT, SIMPLY MARK, WITH A NO. 2 LEAD PENCIL, THE ALTERNATIVE THAT INDICATES YOUR OWN OPINION. AFTER READING EACH STATEMENT, MAKE ONE OF THE FOLLOWING FIVE CHOICES:

STRONGLY AGREE, AGREE, NOT SURE, DISAGREE, STRONGLY DISAGREE

STR AGR — AGR — NOT SURE — DISA — STR DISA

1. I WOULD ENJOY WORKING WITH POOR PEOPLE TO HELP THEM BETTER THEIR LIVES.
2. POOR PEOPLE TEND TO BEHAVE IN CHILDISH WAYS.
3. POVERTY IS LARGELY A FUNCTION OF BAD LUCK, INJUSTICE, OR DISCRIMINATION.
4. I WOULD BE EMBARRASSED TO INTRODUCE A POOR PERSON TO MY FRIENDS.
5. POOR PEOPLE ARE LESS TRUSTWORTHY THAN PEOPLE WITH MORE MONEY.
6. IN GENERAL, POOR PEOPLE LACK INTELLIGENCE.
7. THE CITY, STATE, AND FEDERAL GOVERNMENT SHOULD DO ALL IT CAN IN TRYING TO HELP POOR PEOPLE BETTER THEIR LIVES.
8. POOR PEOPLE TEND TO BE AS INTERESTED IN THEIR CHILDREN AS ARE PEOPLE WITH MORE MONEY.
9. VIOLENT BEHAVIOR CHARACTERIZES THE POOR.

STR AGR — AGR — NOT SURE — DISA — STR DISA

10. MOST POOR PEOPLE DO NOT KNOW WHAT THEY WANT OUT OF LIFE.
11. POOR PEOPLE DESERVE AS MUCH RESPECT AND CONSIDERATION AS ANYONE ELSE.
12. MOST POOR PEOPLE ARE POOR BECAUSE THEY ARE LAZY.
13. IT'S HARD FOR AN ABLE-BODIED MAN TO RESPECT HIMSELF IF HE DOESN'T WORK.
14. IMMORAL PRACTICES ARE MUCH MORE COMMON AMONG THE POOR.
15. WE SHOULD TRY TO HELP ONLY THOSE WHO APPRECIATE OUR HELP.
16. JUST ABOUT EVERY TYPE OF PERSONALITY CAN BE FOUND AMONG THE POOR.
17. POVERTY IS A SIGN OF FAILURE IN LIFE.
18. POVERTY IS QUITE OFTEN DUE TO LACK OF SELF CONTROL, WILL-POWER, OR THE DESIRE TO GET AHEAD.
19. POOR PEOPLE WOULD IMPROVE THEMSELVES IF THEY WERE GIVEN ADDITIONAL OPPORTUNITIES.

STR AGR — AGR — NOT SURE — DISA — STR DISA

20. HOW MUCH MONEY A PERSON MAKES IS USUALLY A GOOD INDICATOR OF HIS CHARACTER.
21. THERE IS LITTLE THAT CAN BE DONE TO HELP THE POOR TO BETTER THEMSELVES SHORT OF TAKING CARE OF THEM OR GIVING THEM MONEY.
22. MOST POOR PEOPLE ARE WILLING TO WORK HARD IF GIVEN THE OPPORTUNITY.
23. IN GENERAL, THE BEHAVIOR OF POOR PEOPLE TENDS TO BE ERRATIC AND UNPREDICTABLE.
24. POOR PEOPLE DON'T CARE HOW THEY LOOK.
25. IT IS THE RESPONSIBILITY OF PEOPLE WHO ARE WELL OFF TO HELP POOR PEOPLE BETTER THEMSELVES.
26. POOR PEOPLE TEND TO BE LOUD, VULGAR, AND IMPOLITE.
27. POOR PEOPLE WILL TAKE ADVANTAGE OF YOU IF YOU GIVE THEM THE OPPORTUNITY.
28. IT WOULD BE ALL RIGHT WITH ME TO HAVE A POOR PERSON AS A CLOSE FRIEND.
29. POOR PEOPLE ARE INHERENTLY DIFFERENT FROM PEOPLE WHO HAVE MORE MONEY.
30. POOR PEOPLE SHOULD HAVE SOMETHING TO SAY ABOUT HOW THE GOVERNMENT SPENDS MONEY TO HELP THEM.

PRESENT WEEK OF CENTER'S OPERATION

:1: :2: :3: :4:

DO NOT MARK IN THIS SPACE

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY Edward Zigler TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE U.S. OFFICE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

© by Edward Zigler, 1965

OPERATION HEAD START WORKER'S ATTITUDE SCALE

IBM H92215

PART II

AGAIN THERE ARE NO RIGHT OR WRONG ANSWERS TO THE FOLLOWING ITEMS. WE ARE INTERESTED IN FINDING OUT WHAT YOU FEEL CHARACTERIZES OR DOES NOT CHARACTERIZE YOUNG CHILDREN. FOR EACH OF THE ADJECTIVES BELOW, SIMPLY MARK WHETHER OR NOT YOU FEEL THE DESCRIPTION IS CHARACTERISTIC OR NOT CHARACTERISTIC OF MOST CHILDREN OF THIS AGE, AND THEN DO THE SAME FOR THE CHILDREN IN THE OPERATION HEADSTART PROGRAM. SINCE WE ARE INTERESTED IN YOUR FIRST OVERALL IMPRESSIONS, IT IS ALL RIGHT TO GO THROUGH THE ITEMS RELATIVELY QUICKLY.

	MOST CHILDREN OF THIS AGE ARE:		**OPERATION HEADSTART CHILDREN ARE:**	
	CHARACTERISTIC	**NOT CHARACTERISTIC**	**CHARACTERISTIC**	**NOT CHARACTERISTIC**
1. ALERT	☐	☐	☐	☐
2. AMBITIOUS	☐	☐	☐	☐
3. ANNOYING	☐	☐	☐	☐
4. ANXIOUS	☐	☐	☐	☐
5. CALM	☐	☐	☐	☐
6. COMPETITIVE	☐	☐	☐	☐
7. CONFIDENT	☐	☐	☐	☐
8. CONSIDERATE	☐	☐	☐	☐
9. CREATIVE	☐	☐	☐	☐
10. CRUEL	☐	☐	☐	☐

	MOST CHILDREN OF THIS AGE ARE:		**OPERATION HEADSTART CHILDREN ARE:**	
	CHARACTERISTIC	**NOT CHARACTERISTIC**	**CHARACTERISTIC**	**NOT CHARACTERISTIC**
11. DEFIANT	☐	☐	☐	☐
12. DEMANDING	☐	☐	☐	☐
13. DEPENDABLE	☐	☐	☐	☐
14. DESTRUCTIVE	☐	☐	☐	☐
15. FEARFUL	☐	☐	☐	☐
16. FRIENDLY	☐	☐	☐	☐
17. HAPPY	☐	☐	☐	☐
18. HOSTILE	☐	☐	☐	☐
19. INQUISITIVE	☐	☐	☐	☐
20. JEALOUS	☐	☐	☐	☐

	MOST CHILDREN OF THIS AGE ARE:		**OPERATION HEADSTART CHILDREN ARE:**	
	CHARACTERISTIC	**NOT CHARACTERISTIC**	**CHARACTERISTIC**	**NOT CHARACTERISTIC**
21. MEDDLESOME	☐	☐	☐	☐
22. NAGGING	☐	☐	☐	☐
23. PATIENT	☐	☐	☐	☐
24. POSSESSIVE	☐	☐	☐	☐
25. SELFISH	☐	☐	☐	☐
26. SELF-SUFFICIENT	☐	☐	☐	☐
27. SPOILED	☐	☐	☐	☐
28. STABLE	☐	☐	☐	☐
29. WELL-MANNERED	☐	☐	☐	☐
30. WITHDRAWN	☐	☐	☐	☐

DO NOT MARK IN THIS SPACE

☐	☐	■	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐	☐	☐	■
■	☐	☐	☐	☐	☐	☐	☐	☐	☐
■	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	■	☐	☐	☐

PARENT EVALUATION OF OPERATION HEAD START

BUDGET BUREAU NO. 116-6510 7°
APPROVAL EXPIRES 6-1-66

CENTER IDENTIFICATION NUMBER

0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐	☐	5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐	☐	5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐	☐	5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐	☐	5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐	☐	5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐	☐	5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐	☐	5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐

TO THE PARENTS: WE WOULD LIKE TO KNOW WHETHER YOU FEEL THAT YOU AND YOUR CHILD HAVE PROFITED FROM PROJECT HEAD START. WE ARE PARTICULARLY INTERESTED IN KNOWING WHAT THINGS YOU LIKED AND WHAT THINGS YOU DID NOT LIKE. THE INFORMATION FROM THIS FORM WILL BE USED TO MAKE FUTURE HEAD START PROGRAMS MORE EFFECTIVE.

THIS EVALUATION IS TO BE DONE WITHOUT PERSONAL IDENTIFICATION. PLEASE DO NOT WRITE YOUR NAME ON THE FORM. THE ONLY IDENTIFYING MARK SHOULD BE THE CHILD DEVELOPMENT CENTER NUMBER, WHICH THE HEAD START CENTER STAFF WILL PROVIDE.

PLEASE USE A NO. 2 PENCIL TO MARK THIS SHEET

COMPLETE BOTH SIDES OF THIS FORM

I. FORMAL CONTACT AND PARTICIPATION

MY REACTIONS TO THE FOLLOWING WERE:	VERY MUCH WORTHWHILE	WORTHWHILE	OCCASIONALLY WORTHWHILE	WASTE OF TIME	NOT IN THE PROGRAM
1. TALKING WITH CHILD'S TEACHERS.	☐	☐	☐	☐	☐
2. MEETING WITH OTHER PARENTS.	☐	☐	☐	☐	☐
3. SPEAKING WITH PARENT-COUNSELOR OR SOCIAL WORKERS.	☐	☐	☐	☐	☐
4. SPECIAL EVENTS:					
DISCUSSION ABOUT a. CHILD CARE	☐	☐	☐	☐	☐
b. HOMEMAKING SKILLS	☐	☐	☐	☐	☐
c. HOUSING CONDITIONS	☐	☐	☐	☐	☐
d. EMPLOYMENT OPPORTUNITIES	☐	☐	☐	☐	☐
e. PERSONAL PROBLEMS	☐	☐	☐	☐	☐
5. GROUP TRIPS IN THE COMMUNITY	☐	☐	☐	☐	☐
6. FILMS SHOWN IN CONNECTION WITH THE PROGRAM	☐	☐	☐	☐	☐
7. OTHER (PLEASE SPECIFY ACTIVITY IN LOWER LEFT CORNER OF FORM)	☐	☐	☐	☐	☐

II. THE CHILD

MY REACTIONS TO THE EXPERIENCES MY CHILD HAS HAD IN THE OPERATION HEAD START PROGRAM ARE:	VERY MUCH WORTHWHILE	WORTHWHILE	OCCASIONALLY WORTHWHILE	WASTE OF TIME	NOT IN THE PROGRAM
1. MEDICAL EXAMINATION	☐	☐	☐	☐	☐
2. DENTAL EXAMINATION	☐	☐	☐	☐	☐
3. OPPORTUNITY TO ATTEND SCHOOL AT AN EARLY AGE.	☐	☐	☐	☐	☐
4. INCREASED EXPERIENCE WITH A VARIETY OF TOYS AND GAMES.	☐	☐	☐	☐	☐
5. INCREASED EXPERIENCE WITH A VARIETY OF BOOKS, STORIES, AND MUSIC.	☐	☐	☐	☐	☐
6. TRIPS INTO THE COMMUNITY.	☐	☐	☐	☐	☐
7. INDIVIDUAL ATTENTION GIVEN TO EACH CHILD BY TEACHER AND AIDES.	☐	☐	☐	☐	☐
8. OPPORTUNITY TO PARTICIPATE IN GROUP ACTIVITIES WITH OTHER CHILDREN.	☐	☐	☐	☐	☐

AS A RESULT OF ATTENDING THE OPERATION HEAD START PROGRAM, MY CHILD WAS AFFECTED IN THE FOLLOWING WAYS:	MUCH BETTER	BETTER	NO CHANGE	WORSE	MUCH WORSE
1. GETTING ALONG WITH OTHER CHILDREN	☐	☐	☐	☐	☐
2. SELF-CONFIDENCE	☐	☐	☐	☐	☐
3. SPEAKING ABILITY	☐	☐	☐	☐	☐
4. EVERYDAY MANNERS	☐	☐	☐	☐	☐
5. FINISHING WHAT HE STARTS	☐	☐	☐	☐	☐
6. DOING WHAT HE IS TOLD	☐	☐	☐	☐	☐
7. INTERESTED IN NEW THINGS	☐	☐	☐	☐	☐
8. CAN DO THINGS ON HIS OWN	☐	☐	☐	☐	☐

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY Edward Zigler

TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE U.S. OFFICE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

OVER

PLEASE SPECIFY OTHER FORMAL CONTACTS AND PARTICIPATIONS

____

____

____

____

DO NOT MARK IN THIS SPACE

☐	☐	☐	☐	☐	■	☐	☐	☐	☐
☐	■	☐	☐	☐	☐	☐	☐	☐	☐
■	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐	■	☐	☐
☐	☐	☐	☐	☐	■	☐	☐	☐	☐

© by Edward Zigler, 1965 IBM H92222 CAP-HS FORM 41 JUN. '65

PARENT EVALUATION OF OPERATION HEAD START

I. THE HOME (a)

CHECK ANY OF THE FOLLOWING WHICH APPLY AS A RESULT OF YOUR CONTACT WITH OPERATION HEAD START:

1. MY HUSBAND OR I HAVE BEEN HELPED BY SOME SOCIAL AGENCY. ☐
2. MY HUSBAND OR I RECEIVED MEDICAL AND/OR DENTAL ATTENTION. ☐
3. A CHILD (OTHER THAN THE ONE(S) ENROLLED IN OPERATION HEAD START) RECEIVED MEDICAL AND /OR DENTAL ATTENTION. ☐
4. MOVED TO BETTER LIVING QUARTERS. ☐
5. REPAIRED OR ADDED THINGS, e.g., FURNITURE, NEW CURTAINS, ETC., TO MY PRESENT LIVING QUARTERS. ☐
6. A FAMILY MEMBER GOT A JOB OR SWITCHED TO A BETTER JOB. ☐
7. MY HUSBAND OR I PLAN TO CONTINUE OUR OWN EDUCATION. ☐
8. MY HUSBAND OR I HAVE SOUGHT LEGAL AID AND/OR FINANCIAL ASSISTANCE. ☐

III. THE HOME (b)	MUCH MORE	MORE	A LITTLE MORE	NOT AT ALL
1. AM AWARE OF NEW THINGS THAT MY FAMILY AND I CAN DO IN THE COMMUNITY.	☐	☐	☐	☐
2. FEEL THAT THE COMMUNITY CARES ABOUT ME AND MY PROBLEMS.	☐	☐	☐	☐
3. HAVE LEARNED NEW THINGS ABOUT RAISING CHILDREN.	☐	☐	☐	☐
4. HAVE BEEN GIVEN NEW IDEAS ABOUT HOW TO TAKE CARE OF MY FAMILY.	☐	☐	☐	☐
5. FEEL HOPEFUL ABOUT MY CHILDREN'S FUTURE.	☐	☐	☐	☐
6. FEEL BETTER ABLE TO HANDLE FAMILY ARGUMENTS THAT ARISE.	☐	☐	☐	☐
7. MADE NEW FRIENDS.	☐	☐	☐	☐

DO NOT MARK IN THIS SPACE

☐	☐	☐	☐	☐	■	☐	☐	☐	☐
☐	■	☐	☐	☐	■	☐	☐	☐	☐
■	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐	■	☐	☐
☐	☐	☐	☐	☐	■	☐	☐	☐	☐

3

PROJECT HEAD START **PARENT PARTICIPATION RECORD** *(To be kept separately for each class)*	*Budget Bureau No. 116-6507* *Approval expires March 31, 1966* **CARD 21** *(1-2)*
CHILD DEVELOPMENT CENTER NO. *(4-14)* **65HS-** ______ - ____	CLASS *(15)*
1. NUMBER OF CHILDREN IN THE GROUP *(Please put responses in these areas.* →	*(17-18)*
2. NUMBER OF MOTHERS OF THESE CHILDREN EMPLOYED AS FULL-TIME PAID WORKERS IN OPERATION HEAD START *(employment in an Operation Head Start program that meets for only half a day should be considered as full-time)*	*(19-20)*
3. NUMBER OF FATHERS OF THESE CHILDREN EMPLOYED AS FULL-TIME, PAID WORKERS IN OPERATION HEAD START	*(21-22)*
4. NUMBER OF MOTHERS OF THESE CHILDREN EMPLOYED AS PART-TIME, PAID WORKERS IN OPERATION HEAD START	*(23-24)*
5. NUMBER OF FATHERS OF THESE CHILDREN EMPLOYED AS PART-TIME, PAID WORKERS IN OPERATION HEAD START	*(25-26)*
6. NUMBER OF MOTHERS OF THESE CHILDREN WHO PERFORMED SOME VOLUNTEER SERVICE *(unpaid)* FOR THE PROGRAM	*(27-28)*
7. NUMBER OF FATHERS OF THESE CHILDREN WHO PERFORMED SOME VOLUNTEER SERVICE *(unpaid)* FOR THE PROGRAM	*(29-30)*
8. HOW MANY FORMAL PARENT MEETINGS WERE HELD?	*(31)*

9. IF FORMAL MEETINGS WERE HELD, HOW MANY PARENTS ATTENDED EACH MEETING?

▨	NO. OF MOTHERS	NO. OF FATHERS	▨	NO. OF MOTHERS	NO. OF FATHERS
1ST FORMAL MEETING	*(32-33)*	*(34-35)*	5TH FORMAL MEETING	*(48-49)*	*(50-51)*
2ND FORMAL MEETING	*(36-37)*	*(38-39)*	6TH FORMAL MEETING	*(52-53)*	*(54-55)*
3RD FORMAL MEETING	*(40-41)*	*(42-43)*	7TH FORMAL MEETING	*(56-57)*	*(58-59)*
4TH FORMAL MEETING	*(44-45)*	*(46-47)*	8TH FORMAL MEETING	*(60-61)*	*(62-63)*

10. WHAT WAS THE TOTAL NUMBER OF FORMAL PARENT-TEACHER CONFERENCES SCHEDULED?	**CARD 22** *(1-2)* *(17)*

11. IF FORMAL PARENT-TEACHER CONFERENCES WERE SCHEDULED, HOW MANY PARENTS ATTENDED?

NO. OF CONFERENCES	NO. OF MOTHERS	NO. OF FATHERS	NO. OF CONFERENCES	NO. OF MOTHERS	NO. OF FATHERS
NONE	*(18-19)*	*(20-21)*	3	*(30-31)*	*(32-33)*
1	*(22-23)*	*(24-25)*	4	*(34-35)*	*(36-37)*
2	*(26-27)*	*(28-29)*	5 OR MORE	*(38-39)*	*(40-41)*

12. IN ADDITION TO TEACHER INITIATED CONFERENCES, HOW MANY:

A. MOTHERS REQUESTED CONFERENCES?	*(42-43)*	B. FATHERS REQUESTED CONFERENCES?	*(44-45)*

13. HOW MANY TRIPS OR SOCIAL EVENTS FOR PARENTS WERE HELD?	*(46)*

14. IF PLANNED TRIPS OR SOCIAL EVENTS WERE HELD, HOW MANY PARENTS ATTENDED THEM? PLEASE SPECIFY IN THE PARENTHESES, THE NATURE OF EACH EVENT, E.G., FILM, LECTURE, RUMMAGE SALES, ETC.

▨	NO. OF MOTHERS	NO. OF FATHERS
1ST EVENT ( )	*(47-48)*	*(49-50)*
2ND EVENT ( )	*(51-52)*	*(53-54)*
3RD EVENT ( )	*(55-56)*	*(57-58)*
4TH EVENT ( )	*(59-60)*	*(61-62)*
5TH EVENT ( )	*(63-64)*	*(65-66)*

CAP-HS FORM 45 JUN 65

(Continued)

(Please check one box for each line.)

	VERY HIGH	HIGH	FAIR	LOW	VERY LOW	CAN'T EVALUATE	
15. IN GENERAL, ENTHUSIASM AND PARTICIPATION AT GROUP PARENT-TEACHER MEETINGS WAS:							
MOTHERS	1	2	3	4	5	6	*(67)*
FATHERS	1	2	3	4	5	6	*(68)*
16. IN GENERAL, ENTHUSIASM AND PARTICIPATION AT SPECIAL EVENTS *(e.g., trips, lectures, films, etc.)* WAS:							
MOTHERS	1	2	3	4	5	6	*(69)*
FATHERS	1	2	3	4	5	6	*(70)*
17. IN GENERAL, PARENTAL ENTHUSIASM AND INTEREST IN THE OPERATION HEAD START WAS:							
MOTHERS	1	2	3	4	5	6	*(71)*
FATHERS	1	2	3	4	5	6	*(72)*

18. IN GENERAL, OVER THE COURSE OF THE PROGRAM, ACTIVE PARTICIPATION AND ENTHUSIASM WAS:

	GREATLY INCREASED	INCREASED	DID NOT CHANGE	DECREASED	GREATLY DECREASED	CAN'T EVALUATE	
MOTHERS	1	2	3	4	5	6	*(73)*
FATHERS	1	2	3	4	5	6	*(74)*

19. IN GENERAL, THE ENTHUSIASM AND INTEREST IN THE OPERATION HEAD START PROGRAM SHOWN BY THE PARENTS OF EACH CHILD IN YOUR CLASS WAS:

CARD 23 *(1-2)*

(Please check one box for each participating parent.)

(Enter child's ID No. for those parents participating.)			VERY HIGH	HIGH	FAIR	LOW	VERY LOW	CAN'T EVALUATE	
1. CHILD'S FULL ID NUMBER – –	*(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
		FATHER	1	2	3	4	5	6	*(23)*
2. CHILD'S FULL ID NUMBER – –	*(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
		FATHER	1	2	3	4	5	6	*(23)*
3. CHILD'S FULL ID NUMBER – –	*(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
		FATHER	1	2	3	4	5	6	*(23)*
4. CHILD'S FULL ID NUMBER – –	*(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
		FATHER	1	2	3	4	5	6	*(23)*
5. CHILD'S FULL ID NUMBER – –	*(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
		FATHER	1	2	3	4	5	6	*(23)*
6. CHILD'S FULL ID NUMBER – –	*(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
		FATHER	1	2	3	4	5	6	*(23)*
7. CHILD'S FULL ID NUMBER – –	*(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
		FATHER	1	2	3	4	5	6	*(23)*

(Continued)

34

19. *(Continued)*

CARD 23 *(1-2)* Continued

		VERY HIGH	HIGH	FAIR	LOW	VERY LOW	CAN'T EVALUATE	
8. CHILD'S FULL ID NUMBER *(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
— —	FATHER	1	2	3	4	5	6	*(23)*
9. CHILD'S FULL ID NUMBER *(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
— —	FATHER	1	2	3	4	5	6	*(23)*
10. CHILD'S FULL ID NUMBER *(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
— —	FATHER	1	2	3	4	5	6	*(23)*
11. CHILD'S FULL ID NUMBER *(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
— —	FATHER	1	2	3	4	5	6	*(23)*
12. CHILD'S FULL ID NUMBER *(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
— —	FATHER	1	2	3	4	5	6	*(23)*
13. CHILD'S FULL ID NUMBER *(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
— —	FATHER	1	2	3	4	5	6	*(23)*
14. CHILD'S FULL ID NUMBER *(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
— —	FATHER	1	2	3	4	5	6	*(23)*
15. CHILD'S FULL ID NUMBER *(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
— —	FATHER	1	2	3	4	5	6	*(23)*
16. CHILD'S FULL ID NUMBER *(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
— —	FATHER	1	2	3	4	5	6	*(23)*
17. CHILD'S FULL ID NUMBER *(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
— —	FATHER	1	2	3	4	5	6	*(23)*
18. CHILD'S FULL ID NUMBER *(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
— —	FATHER	1	2	3	4	5	6	*(23)*
19. CHILD'S FULL ID NUMBER *(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
— —	FATHER	1	2	3	4	5	6	*(23)*
20. CHILD'S FULL ID NUMBER *(16-21)*	MOTHER	1	2	3	4	5	6	*(22)*
— —	FATHER	1	2	3	4	5	6	*(23)*

CONSULTANT'S CHECKLIST	CARD 81 *(1-3)*
NSULTANT	CODE *(3-5)*
GRANTEE	GRANTEE NO. *(6-12)* 65HS
DATE OF LAST DAY OF VISIT *(Month and day)* *(13-16)*	NO. OF DAYS *(17)*

(NOTE: Numbers in parentheses are for Office Use Only.)

1. WHAT NUMBER OF NON-PROFESSIONALS ARE BEING USED IN THE FOLLOWING CATEGORIES?	NEIGHBORHOOD		OTHER VOL.
	PAID	VOL.	
A. CUSTODIANS	*(18-19)*	*(20-21)*	*(22-23)*
B. FOOD SERVICES	*(24-25)*	*(26-27)*	*(28-29)*
C. TRANSPORTATION	*(30-31)*	*(32-33)*	*(34-35)*
D. TEACHER AIDE	*(36-37)*	*(38-39)*	*(40-41)*
E. HEALTH AIDE	*(42-43)*	*(44-45)*	*(46-47)*
F. NEIGHBORHOOD WORKER	*(48-49)*	*(50-51)*	*(52-53)*
G. BABY-SITTER	*(54-55)*	*(56-57)*	*(58-59)*
H. OTHERS *(Identify on "Comments Sheet")*	*(60-61)*	*(62-63)*	*(64-65)*

(Check applicable column for each question. Do not mark shaded areas.)	YES (1)	NO (2)	PARTIAL (3)
2. HAS ANY FORMAL TRAINING BEEN ARRANGED FOR PAID PROFESSIONALS?			*(66)*
VOLUNTEERS?			*(67)*
3. DOES THE PROFESSIONAL STAFF USE NON-PROFESSIONALS WELL?			*(68)*
VOLUNTEERS WELL?			*(69)*
4. DO NON-PROFESSIONALS FEEL THEY ARE BEING USED WELL?			*(70)*
VOLUNTEERS?			*(71)*
5. ARE PARENT MEETINGS BEING HELD?			*(72)*
HAVE ANY SUGGESTIONS BY PARENTS BEEN ADOPTED BY THE CENTER?			*(73)*
ARE PARENTS HELPING TO PLAN FOLLOW-THROUGH PROGRAMS?			*(74)*
FULL-YEAR CHILD DEVELOPMENT CENTERS ?			*(75)*
6. ARE ANY OF THESE ORGANIZATIONS PROVIDING ASSISTANCE TO THE PROGRAM?	▨	▨	CARD 82 *(1-2)*
SCHOOLS		*(13)*	▨
PUBLIC HEALTH		*(14)*	▨
PUBLIC WELFARE		*(15)*	▨
HOSPITALS OR CLINICS		*(16)*	▨
MEDICAL SOCIETY		*(17)*	▨
DENTAL SOCIETY		*(18)*	▨
NURSING SOCIETY		*(19)*	▨
OPTOMETRISTS		*(20)*	▨
DIETITIANS OR HOME ECONOMISTS		*(21)*	▨
OTHERS *(Identify on "Comments Sheet")*		*(22)*	▨
7. HAVE THESE THINGS BEEN DONE?	▨	▨	▨
A. MEDICAL EXAMINATIONS SCHEDULED FOR ALL CHILDREN			*(23)*
B. DENTAL EXAMINATIONS SCHEDULED FOR ALL CHILDREN			*(24)*
C. IMMUNIZATIONS ARRANGED FOR			*(25)*
D. NEEDED MEDICAL TREATMENT ARRANGED FOR			*(26)*
E. NEEDED DENTAL TREATMENT ARRANGED FOR			*(27)*
F. GLASSES PROVIDED AS NEEDED			*(28)*
G. RESPONSIBILITY ASSIGNED TO SEE THAT CHILDREN GET NEEDED MEDICAL OR DENTAL TREATMENT			*(29)*
8. BASED ON YOUR OBSERVATIONS, PLEASE CHARACTERIZE THE OVERALL ACTIVITY OF THE STAFF ACCORDING TO THESE ITEMS:	▨	▨	▨
A. TAILORS PROGRAM TO THE NEEDS OF THE INDIVIDUAL CHILD			*(30)*
B. APPEARS TO HAVE ESTABLISHED RAPPORT WITH	▨	▨	▨
(1) THE CHILDREN AS A GROUP			*(31)*
(2) CHILDREN WITH SPECIAL PROBLEMS			*(32)*
C. BELIEVES IN AND IMPLEMENTS A RELATIVELY UNSTRUCTURED PROGRAM OF ACTIVITIES			*(33)*
D. BELIEVES IN AND IMPLEMENTS A HIGHLY STRUCTURED PROGRAM OF ACTIVITIES			*(34)*

CAP HS FORM 47 JUN 65 (Page 1 of 3) *(Continued)*

8. *(Continued)*	YES (1)	NO (2)	PARTIAL (3)
E. BELIEVES ALL CHILDREN SHOULD BE EXPECTED TO ACHIEVE A SPECIFIC LEVEL OF GOALS DURING THE PROGRAM			*(35)*
F. BELIEVES THAT GOALS SHOULD BE ADAPTED TO THE INDIVIDUAL CHILD			*(36)*
G. EMPHASIZES SELF-DICIPLINE AND SELF-CONTROL			*(37)*
H. ENCOURAGES FREE PLAY AND EXPRESSION			*(38)*
I. PROVIDES A WIDE CHOICE OF LEARNING ACTIVITIES FOR THE CHILDREN THROUGH ACTIVITIES INVOLVING:			*(39)*
MUSIC	*(40)*		
ART	*(41)*		
SCIENCE	*(42)*		
CARE OF PETS	*(43)*		
NATURE STUDY	*(44)*		
NUMBER CONCEPTS	*(45)*		
PRINTED WORD	*(46)*		
PERSONAL AND BODY NEEDS	*(47)*		
MODERN SPACE AND COMMUNICATION DEVELOPMENTS	*(48)*		
ADULTS OF VARIED BACKGROUNDS AND ABILITIES	*(49)*		
THE LARGER WORLD ABOUT THEM	*(50)*		
J. MAKES EFFECTIVE USE OF MATERIALS AND EQUIPMENT, ADAPTED TO THE PRE-SCHOOL CHILD			*(51)*
K. PROVIDES A WIDE VARIETY OF OUTDOOR PLAY ACTIVITIES			*(52)*
L. PROVIDES FOR SIGNIFICANT FIELD TRIPS			*(53)*
M. PROVIDES TOTAL GROUP ACTIVITIES THAT ARE OF SHORT DURATION AND INTERESTING TO THE CHILDREN			*(54)*
N. PERMITS AND ENCOURAGES PARENT *(non-staff)* PARTICIPATION IN THE CLASSROOM			*(55)*
O. HAS ACHIEVED ADEQUATE WORKING RELATIONSHIPS AMONG OTHER PROFESSIONAL MEMBERS OF THE STAFF			*(56)*
P. HAS ACHIEVED ADEQUATE WORKING RELATIONSHIPS AMONG NON-PROFESSIONAL MEMBERS OF THE STAFF			*(57)*
Q. HAS ESTABLISHED ADEQUATE COMMUNICATION WITH THE CHILDREN'S PARENTS			*(58)*
R. PLAN AND IMPLEMENT PROGRAM WHICH EMPHASIZES LANGUAGE DEVELOPMENT			*(59)*
S. IS AWARE OF THE CREATIVE AND LEARNING POTENTIAL OF CHILDREN'S PLAY ACTIVITIES			*(60)*
T. ENCOURAGES THE CHILDREN'S CURIOSITY, SPONTANEITY, AND EXPRESSION OF FEELINGS			*(61)*
U. CAN ACCEPT THE BEHAVIOR OF CHILDREN FROM A DIFFERENT SOCIAL STATUS THAN THEIR OWN			*(62)*
V. HELPS CHILDREN FEEL ACCEPTED AND GOOD ABOUT THEMSELVES			*(63)*
W. EXPLOITS THE WORLD OF THINGS AND IDEAS TO HELP CHILDREN GAIN NEW CONCEPTS AND UNDERSTANDINGS AND CREATE AN AVENUE FOR COMMUNICATION SKILLS			*(64)*
X. ENCOURAGES THE CHILDREN AND GIVES THEM TIME TO MAKE CAREFUL OBSERVATIONS OF THINGS THAT INTEREST THEM			*(65)*
Y. CAPITALIZES ON THE DIFFERENCES BROUGHT TO THE CENTER BY CHILDREN OF DIFFERING BACKGROUNDS AND CULTURES			*(66)*
Z. RESPONDS TO CHILDREN IN A WAY THAT HELPS THE CHILD TO SEE HIMSELF AND HIS INTERESTS AS WORTHY			*(67)*
AA. PLANS EXPERIENCES FOR THE CHILDREN THAT HELPS THEM APPRECIATE THE SERVICES OF POLICEMEN, FIREMEN, DOCTORS, DENTISTS AND OTHERS WHO SERVE THE NEEDS OF THE COMMUNITY			*(68)*
9. PLEASE INDICATE SEPARATELY FOR EACH CATEGORY AND ALSO CHECK BOX AT LEFT WHICH CHARACTERIZES THE MAJORITY OF TEACHERS IN THE PROGRAM.			CARD 83 *(1-2)*
A. PROFESSIONAL TRAINING IN: *(22)*			
CHILD OR HUMAN GROWTH AND DEVELOPMENT (1) ☐		*(13)*	
EARLY CHILDHOOD EDUCATION (2) ☐		*(14)*	
ELEMENTARY EDUCATION (3) ☐		*(15)*	
CHILD PSYCHOLOGY (4) ☐		*(16)*	
PEDIATRIC NURSING (5) ☐		*(17)*	

(Continued)

9. *(Continued)*	(22)	YES (1)	NO (2)	PARTIAL (3)
SOCIAL WORK	(6) ☐		*(18)*	
OTHER	(7) ☐		*(19)*	
MIXED	(8) ☐		*(20)*	
NONE	(9) ☐		*(21)*	
B. ONE OR MORE YEARS EXPERIENCE IN:	(32)			
NURSERY SCHOOL	(1) ☐		*(23)*	
KINDERGARTEN	(2) ☐		*(24)*	
ELEMENTARY SCHOOL	(3) ☐		*(25)*	
NURSING	(4) ☐		*(26)*	
SOCIAL WORK	(5) ☐		*(27)*	
RECREATION	(6) ☐		*(28)*	
MIXED	(7) ☐		*(29)*	
OTHER	(8) ☐		*(30)*	
NONE	(9) ☐		*(31)*	
10. ARE TEACHERS ASSIGNED ANY RESPONSIBILITIES FOR:				
A. SEEING THAT THE CHILD GETS MEDICAL TREATMENT			*(33)*	
B. HELPING PARENTS TO LEARN ABOUT THEIR CHILDREN			*(34)*	
C. HELPING TO SOLVE FAMILY PROBLEMS WHICH REQUIRE SOCIAL SERVICES			*(35)*	
11. PLEASE CHECK THE APPROPRIATE BOXES IN EACH CATEGORY.				
A. CENTER PROVIDES BREAKFAST (1) ☐ *(36)* SNACK (1) ☐ *(37)* LUNCH (1) ☐ *(38)*				
B. QUALITY, VARIETY, AND SERVICE OF FOOD APPEAR *(39)* ADEQUATE ☐ (1) INADEQUATE ☐ (2) MIXED ☐ (3)				
12. ARE THERE ANY SIGNIFICANT PROBLEMS IN THE RELATIONSHIP BETWEEN GRANTEE AND SPONSOR? *(Please describe on "Comments Sheet")*			*(40)*	
13. IS PRESENT SPACE ADEQUATE?			*(41)*	
SIZE?			*(42)*	
CONDITION?			*(43)*	
(If not, describe on "Comments Sheet")				
14. HAVE PLANS BEEN MADE TO TRANSMIT RECORDS TO THE SCHOOL SYSTEM?			*(44)*	
15. PLEASE CHECK THE KINDS OF PROGRAMS WHICH ARE BEING PROVIDED FOR PARENTS				
HELP ON CHILD REARING		*(45)*		
HOMEMAKING EDUCATION		*(46)*		
CONSUMER EDUCATION		*(47)*		
OTHERS *(Please list on "Comments Sheet")*		*(48)*		
16. ARE THE SERVICES OF SOCIAL WORKERS AVAILABLE TO THE PROGRAM?				*(49)*
17. ARE THE CHILDREN SUPPLIED WITH ADEQUATE CLOTHING TO ATTEND THE CENTER?				*(50)*
18. DOES THE CENTER HAVE ENOUGH CONSUMABLE SUPPLIES AND MATERIALS TO OPERATE EFFECTIVELY? *(Please describe deficiencies on "Comments Sheet")*				*(51)*
19. IS THERE ANY EVIDENCE OF DISCRIMINATION TOWARD CHILDREN, STAFF OR PARENTS? *(If so, please describe on "Comments Sheet".)*				*(52)*
20. IS THE CENTER HAVING ANY SIGNIFICANT PROBLEM IN MAINTAINING ATTENDANCE? *(If so, please describe what is being done to overcome the problem on "Comments Sheet".)*				*(53)*
21. ARE PLANS BEING MADE TO PROVIDE ADDITIONAL PROGRAMS THIS FALL FOR HEAD START CHILDREN?			*(54)*	
A. SUPPLEMENTARY EDUCATIONAL PROGRAM			*(55)*	
B. MEDICAL SERVICES			*(56)*	
C. SOCIAL SERVICES			*(57)*	
D. PARENT EDUCATION			*(58)*	
22. DOES THE COMMUNITY PLAN TO HAVE A FULL-YEAR CHILD DEVELOPMENT CENTER?			*(59)*	
A. FOR APPROXIMATELY HOW MANY CHILDREN? ______________	*(60-63)*			
B. IS ADEQUATE SPACE AVAILABLE?			*(64)*	
C. IS ADEQUATE PROFESSIONAL STAFF AVAILABLE?			*(65)*	
23. IS ANYTHING BEING DONE TO ADAPT FIRST GRADE OR KINDERGARTEN PROGRAMS TO CHILD DEVELOPMENT CONCEPTS? *(Please describe on "Comments Sheet)*			*(66)*	

NORC
SRS-864

Budget Bureau No. 116-6510

Approval expires June 1, 1966

PROJECT HEAD START PARENT INTERVIEW

NAME OF HEAD START CENTER	CHILD'S NAME:	
ADDRESS OF HEAD START CENTER	CHILD'S ADDRESS:	
(street address)	(street address)	
(city and state)	(city and state)	
NUMBER OF HEAD START CENTER	CHILD'S ID. NO.	TELEPHONE NUMBER:

INTRODUCTION

Hello. I'm (your name) from Project Head Start. We are interviewing some of the parents of Head Start children, and I understand that (name of child) was registered for the program. May I speak with the child's mother (or stepmother)?

IF MOTHER IS NOT HOME, FIND OUT BEST TIME TO CALL BACK FOR INTERVIEW.

IF NO MOTHER OR STEPMOTHER IN HOUSEHOLD, ASK:

May I speak with the female head of the household?

IF NO FEMALE HEAD OF HOUSEHOLD, ASK:

May I speak with the child's father (or, if no father, male head of the household)?

RECORD OF CALLS

CALL	DATE	TIME	OUTCOME	YOUR NAME
1				
2				
3				
4				
5				

CAP-HS 41 (Rev. Aug. 1965) replaces CAP-HS Forms 41 and 46 dated June 1965 which may be used.

TIME INTERVIEW BEGAN: ____________ A.M.
P.M.

First, I'd like to list all the persons who live in this household.

A. 1. Let's see. The child who was in Head Start is (name of child). WRITE CHILD'S NAME ON THE FIRST LINE OF TABLE ON PAGE 3.

2. IF YOU ARE INTERVIEWING MOTHER OR STEPMOTHER:
And you are the child's mother? May I have your name, please? WRITE MOTHER'S (OR STEPMOTHER'S) NAME ON SECOND LINE.

IF YOU ARE INTERVIEWING SOMEONE OTHER THAN MOTHER OR STEPMOTHER:
Does (child's) mother live in this household? IF YES, ASK "What is her name, please?" AND WRITE NAME ON SECOND LINE. IF NO, WRITE IN "ABSENT" ON SECOND LINE.

3. Does (child's) father (or stepfather) live in this household? IF YES, ASK "What is his name, please?" AND WRITE NAME ON THIRD LINE. IF NO, WRITE IN "ABSENT" ON THIRD LINE.

4. What other members of (child's) immediate family live in the household with (child)? WRITE NAMES OF BROTHERS, SISTERS, GRANDPARENTS, AUNTS, UNCLES, AND OTHER FAMILY MEMBERS WHO LIVE IN THIS HOUSEHOLD ON SUBSEQUENT LINES.

5. What other persons live in the household with (child)? WRITE IN NAMES OF PEOPLE WHO LIVE IN HOUSEHOLD BUT ARE NOT RELATED TO THE CHILD.

CHECK THE LINE TO THE LEFT OF THE PERSON YOU ARE INTERVIEWING. THEN RECORD THE FOLLOWING INFORMATION FOR EACH PERSON LISTED.

B. What is (each person's) relationship to (child)? Write the one code 4, 5, 6, or 7 (use the legend at the bottom of page 3) to describe the correct relationship under "B." If unrelated to child, write the one code 8, 9 or 0 (use the same legend at the bottom of page 3) which describes the person's role in the household.

C. CIRCLE CODE 1 or 2 FOR MALE OR FEMALE UNDER "C" FOR EACH PERSON IN HOUSEHOLD.

D. How old was (each person) on his (her) last birthday? WRITE AGE UNDER "D." IF INFANT UNDER 1 YEAR, WRITE IN "0." IF RESPONDENT DOESN"T KNOW EXACT AGE, ASK FOR A "BEST GUESS."

E. What is the highest grade in school that (each person) completed? WRITE IN NUMBER OF SCHOOL YEARS, WRITE IN "E." (2 years high school = 10, completed high school = 12, completed college = 16). FOR CHILDREN UNDER AGE 6, WRITE "0" WITHOUT ASKING.

F. ASK FOR EACH PERSON AGES 5-20: Will (person) be going to school this fall? CIRCLE THE CODE FOR "YES," "NO," OR "DON'T KNOW" UNDER "F."

G. And in what state was (each person) born? WRITE NAME OF STATE UNDER "G." IF BORN OUTSIDE U.S., WRITE IN NAME OF COUNTRY.

HOUSEHOLD ENUMERATION

CIRCLE LINE NO. TO INDICATE RESPONDENT

	A. NAME	B. RELATIONSHIP TO CHILD	C. SEX	D. AGE	E. YEARS OF SCHOOL	F. GOING TO SCHOOL THIS FALL?	G. STATE OR COUNTRY OF BIRTH
		Child	M...1 F...2			Yes........1 No.........2 D.K. 3	
		Mother (or step-mother)	M...1 F...2			Yes........1 No.........2 D.K........3	
		Father (or step-Father)	M...1 F...2			Yes........1 No.........2 D.K. 3	
			M...1 F...2			Yes........1 No.........2 D.K. 3	
			M...1 F...2			Yes........1 No.........2 D.K. 3	
			M...1 F...2			Yes........1 No.........2 D.K. 3	
			M...1 F...2			Yes........1 No.........2 D.K. 3	
			M...1 F...2			Yes........1 No.........2 D.K. 3	
			M...1 F...2			Yes........1 No.........2 D.K. 3	
			M...1 F...2			Yes........1 No.........2 D.K. 3	
			M...1 F...2			Yes........1 No.........2 D.K. 3	
			M...1 F...2			Yes........1 No.........2 D.K. 3	

LEGEND

4.....Brother/Sister
5.....Uncle/Aunt
6.....Grandparent
7.....Relative
8.....Roomer
9.....Friend
0.....Other

Now, we're ready to begin the main part of the interview.

1. As part of the Head Start program, did you

		Yes	No
A.	Talk with any of (child's) teachers?	1	2
B.	Get to know any other parents you didn't know before?	1	2
C.	Talk with any social workers or counselors about (child)?	1	2
D.	Attend any special meetings about child care?	1	2
E.	Attend any special meetings about homemaking skills?	1	2
F.	Attend any special meetings about housing conditions?	1	2
G.	Attend any special meetings about job opportunities?	1	2
H.	Attend any special meetings to talk about your own personal problems?	1	2
I.	See any films or movies shown in connection with the program?	1	2
J.	Go on any group trips in the community?	1	2

---

2. FOR EACH ITEM CODED "YES" IN QUESTION 1, ASK:

How worthwhile did you feel it was to (each item below which you coded "Yes" in Question 1)--Was it very much worthwhile, was it all right, or was it a waste of time?

		Very Much	All Right	Waste of Time	Don't Know
A.	Talk with teachers?	3	4	5	6
B.	Get to know parents you didn't know before?	3	4	5	6
C.	Talk with social workers or counselors about (child)?	3	4	5	6
D.	Attend special meetings about child care?	3	4	5	6
E.	Attend special meetings about homemaking skills?	3	4	5	6
F.	Attend special meetings about housing conditions?	3	4	5	6
G.	Attend special meetings about job opportunities?	3	4	5	6
H.	Attend special meetings about personal problems?	3	4	5	6
I.	See films or movies in connection with the program?	3	4	5	6
J.	Go on group trips in the community?	3	4	5	6

3. As part of the Head Start program, did (child)...	Yes	No	Don't Know
A. Have a medical examination?	1	2	3
B. Have a dental examination?	1	2	3
C. Take any trips in the community?	1	2	3
D. Get to know any new toys or games?	1	2	3
E. Get to see or hear a lot of books and stories and music? . .	1	2	3
F. Get any individual attention from the teacher?	1	2	3
G. Have a chance to take part in group activities with other children?	1	2	3

---

4. FOR EACH ITEM CODED "YES" IN Q. 3 ABOVE, ASK:

How worthwhile did you feel it was for (child) to (each item below which you coded "Yes" in Q. 3)--very much worthwhile, all right, or was it a waste of time?

	Very Much	All Right	Waste of Time	Don't Know
A. Have a medical examination?	3	4	5	6
B. Have a dental examination?	3	4	5	6
C. Take trips in the community?	3	4	5	6
D. Get to know new toys and games?	3	4	5	6
E. See and hear the books, stories and music? . .	3	4	5	6
F. Get individual attention from the teacher? . .	3	4	5	6
G. Take part in group activities with other children?	3	4	5	6

---

5. A. Did the Head Start program have any bad effects on the child, as far as you can tell?

Yes. 1
No 2
Don't Know 3

B. Did the program have any good effects on the child, as far as you can tell?

Yes. 1
No 2
Don't Know 3

6. Since the beginning of the Head Start program, would you say that (child) is much better, somewhat better, about the same, somewhat worse, or much worse as far as:

	Much better	Somewhat better	About same	Somewhat worse	Much worse	Don't Know
A. Getting along with other children is concerned?	1	2	3	4	5	6
B. How about in self-confidence? . . .	1	2	3	4	5	6
C. As far as speaking ability is concerned?	1	2	3	4	5	6
D. How about everyday manners?	1	2	3	4	5	6
E. Finishing what he starts?	1	2	3	4	5	6
F. Doing what he is told?	1	2	3	4	5	6
G. Being interested in new things? . .	1	2	3	4	5	6
H. Being able to do things on his own?	1	2	3	4	5	6

---

7. As a result of Project Head Start, did you (or your husband). . .

	Yes	No
A. Get help of any kind from any social agency?	1	2
B. Get any medical or dental attention?	1	2
C. Make any plans to continue your own education?	1	2
D. Get a job or switch to a better job?	1	2

---

8. As a result of Project Head Start . . . . . .

	Yes	No
A. Do you yourself feel any more hopeful about (child's) future?	1	2
B. Did you yourself make any new friends?.	1	2
C. Did you learn anything you didn't know before about raising children?	1	2
D. Do you feel that the community cares at all about you and your problems?	1	2

9. Has (child) ever attended a Day Care Center?...A summer camp?...A Settlement House Program?...Sunday School?...Any other such programs?...
CIRCLE CODE FOR EITHER YES OR NO FOR EACH ITEM.

	Yes	No	Don't Know
A. Day Care Center	1	2	3
B. Summer camp	1	2	3
C. Settlement House Program . .	1	2	3
D. Sunday School	1	2	3
E. Other (SPECIFY)	1	2	3

---

10. Do you own or rent your place here?

Own apartment . .	GO TO Q. 11	1
Own house	GO TO Q. 11	2
Rent house. . . .	ASK A	3
Rent apartment .	ASK A	4
Other (SPECIFY)________________ ________________	ASK A	5

A. IF RENT: Is your place here part of a public housing project?

Yes	1
No	2

---

11. How many rooms do you have here? WRITE IN NUMBER.

☐ rooms

---

12. A. How many other children does (child) share his bedroom with?

One other child	1
Two	2
Three	3
Four	4
Five or more children	5
None	6
Don't Know.	7

B. How many adults does (child) share his bedroom with?

One adult	1
Two	2
Three	3
Four	4
Five or more	5
None	6
Don't Know.	7

13. How long has your family been living here in this home? CIRCLE ONLY ONE CODE.

Less than six months	ASK A	1
Six months to less than 1 year	ASK A	2
1 year to less than 2 years	ASK A	3
2 years to less than 3 years	GO TO Q. 14	4
3 years to less than 5 years	GO TO Q. 14	5
5 years to less than 10 years	GO TO Q. 14	6
10 years or longer	GO TO Q. 14	7
All my life	GO TO Q. 15	8

A. IF LESS THAN TWO YEARS: How many times have you moved during the last two years? COUNT MOVE TO PRESENT HOME AS ONE MOVE.

Once	1
Twice	2
Three times	3
Four times	4
Five to eight times	5
Nine to twelve times	6
More than twelve times	7

---

14. Where did you live just before you moved here . . . Did you live in this same neighborhood, in a different part of this city (town), in another part of this state, or in a different state? CIRCLE ONLY ONE CODE.

Same neighborhood	1
Different part of city or town	2
Another part of the same state	3
Another state	4
Other (SPECIFY) ______________________	5

15. How many people in your family are employed right now?

One	ASK A	1
Two	ASK A	2
Three	ASK A	3
Four	ASK A	4
Five or more	ASK A	5
None	GO TO Q. 16	9

A. IF ANYONE EMPLOYED: Who is (are) employed? CIRCLE ALL THAT APPLY.

Mother	1
Father	2
Older brother(s)	3
Older sister(s)	4
Grandmother	5
Grandfather	6
Other (SPECIFY) ________________	7

---

16. Who usually takes care of (child) during the day? CIRCLE ONLY ONE CODE.

Father	1
Mother	2
Aunt	3
Grandmother	4
Sister	5
Brother	6
Friend of family	7
Baby sitter	8
Other (SPECIFY) ________________	9
Don't Know	0

---

17. Aside from when (child) is at the Headstart school, is (he/she) usually taken care of in your home or someplace else? (Where?)

In own home	1
Nursery school or Day Care Center	2
At home of relative	3
At home of baby sitter	4
Other (SPECIFY) ________________	5
Don't Know	6

18. Are there any languages spoken at home other than English?

Yes	ASK A AND B	1
No	GO TO Q. 19	2

IF YES:

A. What language is spoken? (Any others?) CIRCLE ALL THAT APPLY.

Arabic	1
Chinese	2
French	3
German	4
Greek	5
Hebrew	6
Italian	7
Japanese	8
Norwegian	9
Polish	1
Portuguese	2
Spanish	3
Swedish	4
Yiddish	5
Other (SPECIFY) ______________ ______________________	6

B. By whom is it spoken? CIRCLE ALL THAT APPLY.

Mother	1
Father	2
Grandfather	3
Grandmother	4
Sisters and/or brothers	5
Others (SPECIFY)______________________	6

---

19. Do you yourself belong to any clubs or organizations, such as church groups, or a labor union, or political organization?

Yes	ASK A	1
No	GO TO Q. 20	2

A. IF YES: How often do you attend club or organization meetings -- more than once a week, about once a week, several times a month, or less often than that?

More than once a week	1
About once a week	2
Several times a month	3
Less often than that	4

---

20. ASK ONLY IF HUSBAND LIVES IN HOUSEHOLD: Does your husband belong to any clubs or organizations of any kind?

Yes	ASK A	1
No	GO TO Q. 21	2

A. IF YES: How often does he attend club or organization meetings -- more than once a week, about once a week, several times a month, or less often than that?

More than once a week	1
About once a week	2
Several times a month	3
Less often than that	4

21. Do you have a radio in your home?

Yes . . ASK A AND B	1
No . . GO TO Q. 22	2

IF YES:

A. About how many hours a day is the radio on in your home? CIRCLE ONLY ONE CODE.

1 hour	1
2 - 3 hours	2
4 - 5 hours	3
6 - 7 hours	4
8 hours or more	5
Less than one hour a day	6
Not every day -- few hours a week	7
Never	8
Don't know	9

B. Who usually listens to it? CIRCLE AS MANY AS APPLY.

Respondent	1
Respondent's husband	2
Child in Head Start	3
Others in Household	4

---

22. Do you have a TV set in your home?

Yes . . ASK A AND B	1
No . . GO TO Q. 23	2

IF YES:

A. About how many hours a day is the TV on in your home? CIRCLE ONLY ONE CODE.

1 hour	1
2 - 3 hours	2
4 - 5 hours	3
6 - 7 hours	4
8 hours or more	5
Less than one hour a day	6
Not every day -- few hours a week	7
Never	8
Don't know	9

B. Who usually watches it? CIRCLE AS MANY AS APPLY.

Respondent	1
Respondent's husband	2
Child in Head Start	3
Others in household	4

23. A. About how often do you go to the movies? CIRCLE ONE CODE IN COLUMN A BELOW.

B. ASK ONLY IF HUSBAND LIVES IN HOUSEHOLD, OTHERWISE GO TO C.
How about your husband--how often would you say he goes to the movies? CIRCLE ONE CODE IN COLUMN B BELOW.

C. And how often does (child) go to the movies? CIRCLE ONE CODE IN COLUMN C BELOW.

	A Respondent	B Husband	C Child
Twice a week or more. . .	1	1	1
Once a week	2	2	2
Once every two or three weeks	3	3	3
Once a month.	4	4	4
Once every two or three months.	5	5	5
Two or three times a year	6	6	6
Once a year or less . . .	7	7	7
Never	8	8	8
Don't know	-	9	9

---

24. A. About how often do you attend religious services? CIRCLE ONE CODE IN COLUMN A BELOW.

B. ASK ONLY IF HUSBAND LIVES IN HOUSEHOLD, OTHERWISE GO TO C.
How about your husband--how often would you say he attends religious services? CIRCLE ONE CODE IN COLUMN B BELOW.

C. And how often does (child) attend religious services? CIRCLE ONE CODE IN COLUMN C BELOW.

	A Respondent	B Husband	C Child
Once a week or more . . .	1	1	1
Twice a month	2	2	2
Once every one to three months.	3	3	3
Two or three times a year	4	4	4
Once a year or less . . .	5	5	5
Never	6	6	6
Don't know.	-	7	7

25. A. And how often do you usually read a newspaper -- every day, about every other day, once a week, or less than once a week. CIRCLE ONE CODE IN COLUMN A BELOW.

B. ASK ONLY IF HUSBAND LIVES IN HOUSEHOLD. OTHERWISE GO TO Q. 26. How often does your husband read a newspaper -- almost every day, about every other day, once a week, or once a month or less? CIRCLE ONE CODE IN COLUMN B BELOW.

	A. Respondent	B. Husband
Almost every day	1	1
Every other day	2	2
Once a week	3	3
Less than once a week .	4	4
Don't know	-	5

---

26. We're interested in how often you usually do a number of other things. I'll read the things we want to know about and you just tell me for each one whether you never do it at all, you do it once every three months or less, about once a month, twice a month, or once a week or more. *HAND RESPONDENT* BLUE CARD. This card has on it what I just read to you and it will help you remember the answer groups. ASK ONE ITEM AT A TIME AND CIRCLE ONE CODE ON EACH LINE.

		Once a Week or More	Twice a Month	Once a Month	Once Every Three Months or Less	Never
A.	Go to a sports event?	4	3	2	1	0
B.	Take part in sports event?	4	3	2	1	0
C.	Read a book or magazine ?	4	3	2	1	0
D.	Go to see friends or relatives?	4	3	2	1	0
E.	Have friends or relatives at your home?	4	3	2	1	0
F.	Eat in a restaurant?	4	3	2	1	0
G.	Go to a concert or a play or a museum ?	4	3	2	1	0
H.	Go on a picnic, for a ride, or swimming ?	4	3	2	1	0
I.	Meet and talk with friends on the street ?	4	3	2	1	0

27. ASK ONLY IF HUSBAND LIVES IN HOUSEHOLD. OTHERWISE GO TO Q. 28.
How often would you say your husband does these same things? ASK ONE ITEM AT A TIME AND CIRCLE ONE CODE ON EACH LINE.

	Once a Week or More	Twice a Month	Once a Month	Once Every Three Months or Less	Never	Don't Know
A. Go to a sports event ?	4	3	2	1	0	X
B. Take part in sports event ?	4	3	2	1	0	X
C. Read a book or magazine ?	4	3	2	1	0	X
D. Go to see friends or relatives ?	4	3	2	1	0	X
E. Have friends or relatives at your home ?	4	3	2	1	0	X
F. Eat in a restaurant ?	4	3	2	1	0	X
G. Go to a concert or a play or a museum ?	4	3	2	1	0	X
H. Go on a picnic, for a ride, or swimming ?	4	3	2	1	0	X
I. Meet and talk with friends on the street ?	4	3	2	1	0	X

28. Were you registered to vote in the election for President last November or didn't you get a chance to register?

Registered . . . .ASK A 1
Not registered . .GO TO Q. 29 . . 2

A. IF REGISTERED: Do you remember whether or not you actually voted?

Voted 4
Did not vote 5
Don't remember 6

29. ASK ONLY IF HUSBAND LIVES IN HOUSEHOLD. OTHERWISE GO TO Q. 30.
Was your husband registered to vote in that election?

Registered . . . .ASK A 1
Not registered . .GO TO Q. 30 . . 2

A. IF REGISTERED: Do you remember whether or not he voted last November?

Voted 4
Did not vote 5
Don't remember 6

30. Have you ever taken a trip outside your own city (town) in:
ASK ONE ITEM AT A TIME, AND CIRCLE CODE FOR YES OR NO FOR EACH.

	Yes	No
A. A car	1	2
B. A bus	1	2
C. A train	1	2
D. An airplane . .	1	2
E. A boat	1	2

IF ANSWER IS "NO" TO ALL, GO TO Q. 32.

---

31 A. Now think about just the last year. How many times have you gone to any place that's 50 miles away or more, aside from moving? CIRCLE ONLY ONE CODE IN COLUMN A BELOW.

B. ASK ONLY IF HUSBAND LIVES IN HOUSEHOLD. OTHERWISE GO TO Q. 32. About how many times during the last year would you say your husband has gone to any place 50 miles away or more? CIRCLE ONLY ONE CODE IN COLUMN B BELOW.

	A. Respondent	B. Husband
None	0	0
One	1	1
Two	2	2
Three	3	3
Four	4	4
Five to eight . . .	5	5
Nine to twelve . . .	6	6
More than twelve . .	7	7

---

32. Which of the following things do you sometimes do in your spare time? ASK ONE ITEM AT A TIME, AND CIRCLE CODE FOR YES OR NO FOR EACH.

	Yes	No
A. Just sit and relax?	1	2
B. Grow flowers or vegetables in a garden?	1	2
C. Sew things, such as dresses or curtains?	1	2
D. Play a musical instrument or sing with a choir?	1	2
E. Play cards or other games?	1	2
F. Any other special thing you do in your spare time?	1	2

G. IF YES TO F: What? WRITE IN WHAT RESPONDENT SAYS:

33. ASK ONLY IF HUSBAND LIVES IN HOUSEHOLD. OTHERWISE GO TO Q. 34. Now I'll read a list of things and you tell me which ones your husband sometimes does in his spare time. ASK ONE ITEM AT A TIME, AND CIRCLE CODE FOR YES OR NO FOR EACH.

		Yes	No	Don't Know
A.	Fishing or hunting?	1	2	3
B.	Work with cars or just tinker with things?	1	2	3
C.	Sit and relax?	1	2	3
D.	Play cards or other games?	1	2	3
E.	Do carpentry just for himself?	1	2	3
F.	Play a musical instrument or sing with a choir?	1	2	3
G.	Grow flowers or vegetables in a garden?	1	2	3
H.	Any other special thing he does in his spare time?	1	2	3

I. IF YES TO H: What? WRITE IN WHAT RESPONDENT SAYS

---

34. A. Does (child) have many toys or games, some but not too many, or only a few?

Many	1
Some	2
A few	3
None	0
Don't Know	4

B. How about children's books or magazines, does (child) have many, some but not too many, or only a few books or magazines?

Many	1
Some	2
A few	3
None	0
Don't Know	4

C. And crayons, paints, and papers, does (child) have many, some but not too many, or only a few crayons, paints, and papers?

Many	1
Some	2
A few	3
None	0
Don't Know	4

35. Has (child) ever had any pets?

Yes 1

No 2

Don't Know . . 3

---

36. How often during the past year has (child) gone to the library -- never, once, a few times, or many times? CIRCLE ONE CODE IN LINE "A" BELOW AND THEN ASK SAME QUESTION FOR OTHER ITEMS ONE AT A TIME.

	Never	Once	A Few Times	Many Times	Don't Know
A. Library?	0	1	2	3	4
B. Supermarket?	0	1	2	3	4
C. Small grocery or food store?	0	1	2	3	4
D. Post Office?	0	1	2	3	4
E. Playground or park?	0	1	2	3	4
F. Zoo?	0	1	2	3	4
G. Airport or railroad station?	0	1	2	3	4
H. Fire station?	0	1	2	3	4
I. Department store?	0	1	2	3	4
J. Parade, circus, or fair?	0	1	2	3	4
K. A restaurant to eat?	0	1	2	3	4
L. Beach, lake, or pool?	0	1	2	3	4
M. Ride in a car?	0	1	2	3	4

37. Just one last question. Here is a card. (HAND RESPONDENT WHITE CARD.) Would you please tell me which one of those is presently your main source of income? CIRCLE ONLY ONE.

Wages, salary	1
Business or profession	2
Social Security	3
Government pension	4
Private pension	5
Old Age Assistance	6
General welfare assistance . . ASK A	7
Aid to Dependent Children (ADC) ASK A	8
Interest, dividends, insurance	9
Rent	0
Cash contributions	X
No money income	y

A. IF WELFARE OR ADC: How long have you been receiving this type of assistance?

Less than six months	1
Six months to less than 1 year	2
1 year to less than 2 years	3
2 years to less than 3 years	4
3 years to less than 5 years	5
5 years to less than 10 years	6
10 years or longer	7

That's all the questions I have. Thank you very much for your time and help.

TIME INTERVIEW ENDED

____________ A.M.

____________ P.M.

IMMEDIATELY AFTER LEAVING RESPONDENT, FILL OUT ITEMS ON NEXT PAGE.

FILL OUT FOLLOWING ITEMS IMMEDIATELY AFTER LEAVING RESPONDENT

38.

A. RESPONDENT'S RACE:

White	1
Negro	2
Other (SPECIFY)	3

B. From what you could see, would you rate this household as -- CIRCLE ONE CODE

Very clean and orderly . . .	1
Fairly clean and orderly . .	2
Clean but not too orderly . .	3
Not clean but orderly	4
Not clean and not orderly . .	5

C. How much trouble did you have getting the respondent to start the interview?

No trouble	1
Some trouble	2
A lot of trouble	3

D. Did respondent at any time try to break off the interview?

Yes	1
No	2

E. CIRCLE ONE CODE TO INDICATE RESPONDENT'S BEHAVIOR DURING INTERVIEW:

Nervous most of the time . .	1
Occasionally nervous	2
Mostly relaxed	3

F. CIRCLE ONE CODE TO INDICATE RESPONDENT'S ALERTNESS AND YOUR ESTIMATE OF INTELLIGENCE:

Dull, couldn't understand . .	1
Slow, had to explain a lot. .	2
Average intelligence.	3
Above average intelligence. .	4

G. LANGUAGE USED IN INTERVIEW:

English, no difficulty. . . .	1
English, some difficulty. . .	2
English, but very difficult .	3
Spanish	4
Other language (SPECIFY). . .	5

H. INTERVIEWER'S SIGNATURE:

I. DATE INTERVIEW COMPLETED:

J. WRITE HERE ANY REMARKS YOU WOULD LIKE TO MAKE ABOUT THIS RESPONDENT OR INTERVIEW:

APPENDIX B

STATISTICAL MODELS AND ANALYSES

A. The PPVT Scores Unmatched With Child Characteristics

Three kinds of scores may be discussed: (1) the scores called "pre" under the rules discussed in subsection II.F of the first volume of this document, (2) a subset of these for which there is a matching postscore, and (3) the (matching) postscores. We shall speak of prescores, matched prescores, and postscores. We shall also speak of a difference score, which is, of course, the excess (possibly negative) of a postscore over its matched prescore. We shall consistently use the letters X, $X^{(m)}$, Y, and D for prescores, matched prescores, postscores, and difference scores, respectively. We shall introduce a "regressed difference" score, $\hat{\alpha}$, below.

The means of these scores and their import are reported in the appropriate sections. Possible selection biases are discussed in subsection II. F. We shall here report on some of the other parameters for the benefit of readers who wish to do some analysis of their own. First, we shall give two frequency tables (Exhibit B-1). They are of a slightly different set of matched PPVT scores than the 634 we have been and shall be discussing; they are from a tape which is one run away from the final tape and they differ from it primarily by being composed of only 621 scores. We introduce this further (but relatively mild) noise factor because the frequency counts on the early tape are the only ones we now have of matched prescores. Asterisks will denote names and symbols associated with these scores. (Frequency tables, sums, and sums of squares for the unstarred scores are available, but are not reproduced here.) We shall denote estimates of parameters coming from frequency tables by a subscript f. Estimates of moments from these frequency tables, using midpoints of the class intervals, are smaller than the nonfrequency estimates.

From Exhibit B-1 we can calculate both an estimate r_f^* of the correlation between matched prescores and postscores and estimates of the regression parameters α and β in the model:

$$E(Y) = \alpha + \beta X \text{ or } E(D) = \alpha + (\beta - 1)X$$

EXHIBIT B-1 FREQUENCY DISTRIBUTION OF PPVT SCORES

Class Intervals	Number of Matched Pre-scores in the Class	Number of Postscores in the Class	Difference Class Intervals	Number of Difference Scores in the Class
0-4	2	2	-21 or below	4
5-9	1	0	-20 → -16	1
10-14	2	2	-15 → -11	5
15-19	9	4	-10 → - 6	26
20-24	17	5	- 5 → - 1	93
25-29	15	10	0 - 4	230
30-34	38	23	5 - 9	123
35-39	64	37	10 - 14	73
40-44	103	59	15 - 19	31
45-49	106	121	20 - 24	18
50-54	89	107	25 - 29	5
55-59	85	107	30 or more	12
60-64	44	60		
65-69	16	34		
70-74	6	15		
75-79	7	7		
80 or over	17	28		

Exhibit B-2 displays these estimates along with the projection of the least squares line onto the D axis at the midpoints of the X class intervals. It indicates that there was more improvement by those whose pretest scores were low. Under the linear model, the hypothesis that improvement declines with ability is the hypothesis that $\beta < 1$. Since the variance of Y is not very much smaller than the average sum of the squares of the X scores about this mean, the standard deviation of $\hat{\beta}_f^*$ is on the order of $1/\sqrt{621}$, or about .04. The hypothesis that $\beta < 1$ would be accepted, then, at a low level of significance.

Finally, we shall give the estimates of the standard deviations of the prescores, postscores, and difference scores. They are calculated from sums and sums of squares of observations and not from frequency tables. In order to estimate the standard deviation of the matched prescores, it was necessary to use the frequency table in Exhibit B-1; in order to avoid underestimating the standard deviation of the matched scores, we used as our estimate:

$$\left(S_D^2 + \frac{634}{633}\bar{D}^2 - S_y^2 + 2r_f^* S_{x,f}^* S_{Y,f}^* \frac{634}{633}\right)^{1/2}$$

Exhibit B-3 gives the estimates of the standard deviations of prescores, matched prescores, postscores, and difference scores. We shall later use these estimates as if they were known standard deviations and hence label them in Exhibit B-3 as $\sigma(X)$, $\sigma(X^m)$, $\sigma(Y)$, and $\sigma(D)$, respectively.

EXHIBIT B-2 ESTIMATES OF CORRELATION (r_f^*) AND REGRESSION PARAMETERS ($\hat{\alpha}_f^*$, $\hat{\beta}_f^*$) OF PRE- AND POST-PPVT SCORES

Correlation	Regression Parameters
$r_f^* = .7896$	$\hat{\alpha}_f^* = 15.67$
	$\hat{\beta}_f^* = .7663$

Midpoint of the Pre* Score Class Interval	$\hat{E}_f^* \{D\} = 15.67 - .2337$ (Midpoint)
2	15.20
7	14.03
12	12.87
17	11.70
22	10.53
27	9.36
32	8.19
37	7.02
42	5.85
47	4.69
52	3.52
57	2.35
62	1.18
67	.01
72	- 1.15
77	- 2.32
83	- 3.49

EXHIBIT B-3 ESTIMATES OF STANDARD DEVIATIONS OF PPVT SCORES

$\sigma(X)$	$\sigma(X^{(m)})$	$\sigma(Y)$	$\sigma(D)$
14.78	14.57	13.82	10.02

B. The 1-Factor Tables

A factor is a possible cause of variation. It appears at levels such as male and female. The 1-factor tables are the result of categorizing PPVT scores by the levels of a single factor. The appropriate level of a factor for a child was taken from the Medical/Dental and Family Information Form. Inability to find a medical/dental form with the same child ID number as the PSI form resulted in the loss of some PSI forms. Moreover, PPVT scores were lost because questions on a found medical/dental form were unanswered. These losses of PPVT scores were not severe, especially when compared with those from unreturned PSI forms and returned PSI forms with no PPVT score.

The analysis of the 1-factor tables is designed to compare levels of a factor. This is the only thing to do with the matched prescores and the postscores. The difference scores can in addition be compared with zero. We know, however, that difference scores averaged across the levels of a factor are positive; the 99 percent confidence interval for the mean of the 634 uncategorized differences is 4.20 - 6.26. The main question is: do the levels differ among themselves? The question of whether the low levels are yet positive is subsidiary to whether there are low levels. We are not, then, primarily testing the positiveness of differences.

The comparison of means is usually done under the assumption that the corresponding variances are equal. We assume, in addition, that the common value is the appropriate value in Exhibit B-3--i. e., that the score variances are known and equal to 14.78 for prescores, etc. Exhibit B-4 gives estimates for the standard deviations of X, Y, and D scores for six factor levels chosen randomly. It also gives the natural logarithm of the estimate of the variance which has approximately a normal distribution with mean equal to the natural logarithm of the variance and variance equal to twice the reciprocal of the number of observations going into the estimate. Hence, the entries for $\log_e S_{(j)}^2$ and $\sqrt{2/n_{(j)}}$ in Exhibit B-3 provide a very rough way of comparing the estimates. For example, one might take as the standard deviation of the difference $\log_e S_{(i)}^2 - \log_e S_{(j)}^2$ the larger of $\sqrt{2/n_{(i)}}$ and $\sqrt{2/n_{(j)}}$. This gives a rough comparability

EXHIBIT B-4 ESTIMATES OF STANDARD DEVIATIONS OF SOME FACTOR LEVELS

j		X	Y	D
Urban/Suburban (1)	$S_{(1)}$	13.28	12.52	10.77
	$\log_e S_{(1)}^2$	5.173	5.054	4.754
	$\sqrt{2/m_{(i)}}$	.043	.072	.072
Lives with mother only (2)	$S_{(2)}$	14.89	13.10	10.55
	$\log_e S_{(2)}^2$	5.401	5.144	4.711
	$\sqrt{2/m_{(2)}}$	.085	.129	.072
Lives with father only (3)	$S_{(3)}$	14.03	8.58	6.77
	$\log_e S_{(3)}^2$	5.282	4.299	3.824
	$\sqrt{2/m_{(3)}}$	.177	.324	.324
Mother works (4)	$S_{(4)}$	15.18	13.40	9.94
	$\log_e S_{(4)}^2$	5.439	5.191	4.593
	$\sqrt{2/m_{(4)}}$	.062	.096	.096
Family income $3,000-$3,999 (5)	$S_{(5)}$	13.78	13.10	7.81
	$\log_e S_{(5)}^2$	5.246	5.145	4.111
	$\sqrt{2/m_{(5)}}$	.093	.155	.155
Family income $4,000-$4,999 (6)	$S_{(6)}$	14.42	12.73	21.93
	$\log_e S_{(6)}^2$	5.337	5.088	6.176
	$\sqrt{2/m_{(6)}}$	.106	.182	.182

indeed, for in addition to approximating the sum of variances, we are ignoring the correlation between estimates across factors. Nonetheless, it is fairly clear that, on the one hand, the variances are not equal either within or between factors and, on the other, that this matters very little. The robustness of our procedures for comparing level means will depend largely on the unequal variances within a factor having an average not too far from the assumed value of the putative common variance. There are no obvious pitfalls pointed out by Exhibit B-4, and it is hard to believe that we are any worse off with an assumed known variance than if we estimated the variances anew for each factor in the usual method of analysis of variance.

We shall compare means, then, with a method equivalent in a sense (to be made precise below) to using a chi-square statistic instead of an F statistic, since we have replaced the usual F statistic denominator with a known variance which results in a X^2 statistic (divided by its degrees of freedom). We shall also make another slight modification of the procedure which first tests the hypothesis that the level means are equal (usually with an F-test) and, having rejected it, looks for the exceptional mean differences. We shall instead examine directly the contrasts which might be of interest were they different from zero, and if we find one different from zero we shall know that the X^2 test would have rejected the hypothesis of equal means. This method, which some readers will by now have recognized as the X^2 modification of Scheffe's S-method of multiple comparison, allows us to miss contrasts which may be significant, but if the investigation of the data themselves does not suggest these contrasts they are probably difficult to find and interpret even if a significant X^2 told us they were there.

That the S-method can be adapted from F to X^2 is apparent from Scheffe's arguments on page 69 of his book, The Analysis of Variance. For if we define a contrast as something of the form:

$$\sum_{j=1}^{c} a_j \mu_j$$

where the $\{\mu_j\}$ are the c level or cell means and

$$\sum_{j=1}^{c} a_j = 0 ,$$

varying $a_1, \ldots, a_c$ and hence the corresponding contrasts will span a c-1 dimensional linear space. Denote a basis for the space of contrasts by

$$t = \begin{pmatrix} t_1 \\ \vdots \\ t_{c-1} \end{pmatrix}$$

and let

$$\hat{t} = \begin{pmatrix} \hat{t}_1 \\ \vdots \\ \hat{t}_{c-1} \end{pmatrix}$$

be the vector of least square estimates of t --i. e., replace μ by $X._j$ where $X._j$ is the cell mean. If the $X._j$ are normal with mean μ, then t has a c-1 variate normal distribution with mean t and covariance matrix we shall call $\Sigma_{\hat{t}}$. It follows that

$$(t - \hat{t})' \Sigma_{\hat{t}}^{-1} (t - \hat{t})$$

has a chi-square distribution with c-1 degrees of freedom, and that

$$(t - \hat{t})' \Sigma_{\hat{t}}^{-1} (t - \hat{t}) \leq X^2_{\alpha;\ c-1} \qquad (1)$$

when $X^2_{\alpha;\, c-1}$ is the upper α percent point of the X^2 distribution is a $1-\alpha$ confidence ellipse for t. But Equation (1) holds if and only if

$$| h'(t - \hat{t})| \le \sqrt{h'(X^2_{\alpha;\, c-1}\Sigma_{\hat{t}})h} \tag{2}$$

That is, if and only if t is between all parallel supporting hyperplanes of the ellipse of Equation (1). We can now choose h to give any contrast $\sum a_j \mu_j$ of interest and its estimate, and Equation (2) becomes

$$|t - \hat{t}| \le \sqrt{X^2_{\alpha;\, c-1}(\sum a_j^2/n_j)\sigma^2} \tag{3}$$

if variance $X._j = \frac{\sigma^2}{n_j}$. For,

$$\begin{aligned} h'\Sigma_{\hat{t}}h &= \mathrm{Var}\,\{h'\hat{t}\} \\ &= \mathrm{Var}\,\{\sum a_j X._j\} \\ &= \sum a_j^2 \frac{\sigma^2}{n_j}. \end{aligned}$$

Thus, Equation (3) holds for all t simultaneously with probability $1-\alpha$ and we have our confidence bounds and a powerful tool for what Scheffe calls "data snooping," since the number of contrasts we test does not change the overall significance level, which we have set at 5 percent.

By choosing the basis t to be the $c-1$ linearly independent contrasts $\mu_1 - \mu_2, \mu_1 - \mu_3, \ldots, \mu_1 - \mu_c$, the hypothesis $\mu_1 = \ldots = \mu_c$ is tested by whether or not the ellipse Equation (1) contains the origin. But for these contrasts,

$$\hat{t}'\Sigma_{\hat{t}}^{-1}\hat{t} = \sum_{j=1}^{c} \frac{(X._j - \bar{x})^2}{\sigma^2/n_j} \tag{4}$$

which is the usual X^2 statistic for testing the equality of means. Moreover, the ellipse will contain the origin if and only if all the parallel supporting hyperplanes do, thus the equivalent of the X^2 test to confidence intervals for all contrasts containing zero.

Since under the null hypothesis a contrast is zero, the constant subtracted from and added to the estimated contrast to form the confidence interval is a bound in the sense that the null hypothesis is rejected if the estimated contrast exceeds it in absolute value. We have calculated bounds for all contrasts of certain kinds for certain scores, and, when the contrasts have exceeded the bounds, we have starred (*) them. Before naming the kinds of contrasts, we must introduce another score.

Because the prescore to postscore gains in PPVT scores may vary between levels of a factor primarily because the prescores vary, an analysis of covariance model might be appropriate (see the discussion in Section IV). The model we have selected is

$$E\{D_{ij}\} = \alpha_j - .2337\, X_{ij}$$

when X_{ij} is the (now assumed non-random) prescore for the ith individual at the jth level. $-.2337$ is, of course, the estimated slope for the regression of D or X when no factor is considered, and here, rather than estimate a common slope for all the levels of a factor, we assume the common value is known and equal to $-.2337$. By a regressed difference score $\hat{\alpha}_j$, we mean the estimate $D_{\cdot j} + .2337\, X_{\cdot j}$ of α_j. If X_{ij} were a constant the variance of $\hat{\alpha}_j$ would be that of $D_{\cdot j}$, and we use Variance $\{D_{\cdot j}\}$ in setting the bounds on $\hat{\alpha}_j$, but we use the smaller variance, 88.9, about the regression.

The constrasts, the estimates for which we have calculated bounds, are: (i) all mean level differences $\mu_j - \mu_k$, and (ii) all level effects $\mu_j - \mu$. The scores whose level means the μ_j represent are: (i) matched prescores, (ii) postscores, (iii) difference scores, and (iv) regressed difference scores.

That is, we have calculated all bounds appropriate to all contrasts of the forms (i) and (ii) for each of the scores (i), (ii), (iii), and (iv).

The bounds, in the sense that if the estimated contrast does not exceed them in absolute value and the confidence interval contains zero, are

$$\sqrt{X^2_{.05;\ c-1}\left|\sum \frac{a_i^2}{n_i}\right|(14.57)}$$

for matched prescores, etc. Finally, a caution that $X_{..}$ is the unweighted average of the cell means and not the overall average $\bar{X}$ of Equation (4). Thus $X_{.j} - X_{..}$ is the least squares estimate of the level effect.

C. The 2-Factor Tables

Pre- and post-PPVT scores, but not difference or matched prescores, were categorized by level combinations of two factors, again by matching PSI forms with medical/dental forms. The analysis of these tables is a relatively straightforward extension of the 1-factor analysis. Again we are primarily looking for differences within levels of a factor pair and are only secondarily concerned with the absolute size of the smaller or larger cells.

Let $X_{ij.}$ (or $Y_{ij.}$) be the cell average for the ijth cell, $i = 1, 2, \ldots, r$; $j = 1, 2, \ldots, c$. We are discussing then, a 2-way layout with one factor at r levels and another at c . Let N_{ij} be the number of PPVT scores in $X_{ij.}$ and let n_{ij} be the number in Y_{ij}. N_{ij} is, of course, much larger than n_{ij} .

We had to form a measure of impact from prescores and postscores. The linear model

$$E\left\{Y_{ij.}\right\} = \alpha_{ij} + \beta X_{ij.}$$

where β is assumed equal to .7663, the regression coefficient of postscores on matched prescores in Exhibit B-2, provides a measure α_{ij} which leaves something to be desired as an absolute number, but which may form a sound basis for comparing the impact of Head Start cells. For $X_{ij.}$ includes $N_{ij} - n_{ij}$ scores, many of which are not like matched prescores. They are too high for matched prescores, probably because they were obtained too late in the program. Now, the assumption of a common cell slope in an Analysis of Covariance is common and works out well; if, in addition, we assume that the common cell slope is the overall slope, we have arrived at our β of .7663. If there is a hooker in this, it is hard to see. If, moreover, the difference between $X_{ij.}$ and $X^{(m)}_{ij.}$ is only that the first is a displacement of the second by a random amount that is approximately independent of the cell effect, then contrasts among our α_{ij} reflect accurately contrasts among the intercepts of an Analysis of Covariance with postscores regressed on matched prescores, even though our α_{ij} are smaller. We have estimated the

α_{ij} by $\tilde{Y}_{ij} = Y_{ij.} - \underset{\sim}{.}7663\, X_{ij.}$ and looked for cell differences in the $\tilde{Y}_{ij.}$ assuming that Var $\tilde{Y}_{ij}$ = Var $Y_{ij.} = (13.82)^2/n_{ij}$. We were forced to this at best labored model by a last-minute bug in a computer program that deprived us of average differences.

So much for what was analyzed and why. The method of analysis was chosen, as in the 1-factor case, to get simultaneous confidence intervals on cell contrasts. The analyses for X, Y, and $\tilde{Y}$ scores differ only in the standard deviation used. For, again we assume standard deviations known and equal $\sigma(X)$ to 14.78, $\sigma(Y)$ to 13.82 and $\sigma(\tilde{Y})$ to 13.82. We shall write about $X_{ij.}$, its mean μ_{ij}, and its variance σ^2/n_{ij}. The contrasts (of all means) of interest are primarily the interactions $\mu_{ij} - \mu_{i.} - \mu_{.j} + \mu_{..}$, where dot denotes average over the subscript. Their least squares estimates are

$$X_{ij.} - X_{i..} - X_{.j.} + X_{...}\,.$$

In addition, the row effects $\mu_{i.} - \mu_{..}$ and the column effects $\mu_{.j} - \mu_{..}$ are contrasts of the μ_{ij}, and confidence intervals for them are also found and reported in the form of bounds on the absolute value of the least squares estimates. Note that the estimates $X_{i..} - X_{...}$ of, say, a row effect in the 2-way tables differ from the estimate of the corresponding level effect in the 1-way table, because in the 2-way table it is possible to estimate the contribution to all means made by the row treatment and distinguish it from the contribution made by the column and the cell itself. The row contribution may still, however, be confounded with something that a 3-way or more table would be required to discover. Similarly, $X_{...}$ is an unweighted average of all means and estimates something different from the weighted average or the unweighted avarage of the 1-way table.

It is possible to get an interaction sum of squares but we do not. It is of no use to us. The confidence limits associated with it bound not the interactions but contrasts of interactions. Moreover, the confidence limits for the row and column effects would have to come from another source, thus requiring some dodge to preserve simultaneity. We have chosen to work directly with cell contrasts. The equivalent chi-square test statistic is

$$\sum \frac{(X_{ij.} - \overline{X}^2)}{\sigma^2/n_{ij}}$$

which has rc - 1 degrees of freedom.

Finally, to greatly simplify the calculations, we have assumed that replacing

$$\sum_{i,j} a_{ij}^2/n_{ij}$$

with

$$\sum_{i,j} a_{ij}^2 \frac{1}{rc} \sum_{ij} \frac{1}{n_{ij}}$$

preserves approximately the simultaneous confidence level and other properties of the intervals.

D. Statistical Analysis NORC Data

Estimating White-Negro Differences

In the description tables made from the NORC survey results, items are starred (*) if there is significant difference between Negro and white responses. The stars were arrived at as follows. The answer for which the overall response was nearest one-half was chosen as "head." (All other answers and nonanswers were then grouped as "tail.") Let $\hat{p}_W$ be the estimate of the proportion of whites that were "head" and let $\hat{p}_N$ be the same for Negroes. Ignoring the fact the dichotimization into "head" and "tail" was done using the data, and ignoring the finite population corrections, and the randomness of the total numbers of Negroes and whites,

$$\begin{aligned} \text{Var}\,(\hat{p}_W - \hat{p}_N) &= \frac{1}{(n_{1W} + 4.3n_{2W})^2}\left[n_{1W}p_{1W}q_{1W} + 18.49n_{2W}p_{2W}q_{2W}\right] \\ &= \frac{1}{(n_{2N} + 4.3n_{2N})^2}\left[n_{1N}p_{1N}q_{1N} + 18.49n_{2N}p_{2N}q_{2N}\right] \end{aligned} \tag{5}$$

where p = the true proportion of "head," $q = 1 - p$, the subscript 2 = the rural midwest, subscript 1 = the rest of the country, subscript N = Negro, subscript W = white. We take

$n_{1W} = 479$ $\quad$ $n_{1N} = 1{,}129$

$n_{2W} = 82$ $\quad$ $n_{2N} = 0$

We now assume that Equation (5) is insensitive enough to difference in strata proportions that we can assume $p_{1W} = p_{2W} = p_W$ and $p_{1N} = p_{2N} = p_N$. Then,

$$\begin{aligned} \text{Var.}\,(\hat{p}_W - \hat{p}_N) &= 2.8850 \times 10^{-3} p_W q_W + .8857 \times 10^{-3} p_N q_N \\ &\leq 3.7708 \times 10^{-3} pq \end{aligned}$$

where p is whichever of p_W and p_N is nearer to one-half and $q = 1 - p$. So, the standard deviation of the difference is bounded by

$$\tilde{\sigma}(\hat{p}_W - \hat{p}_N) = .06141\sqrt{pq}$$

The table below lists some values of $2\tilde{\sigma}$.

EXHIBIT B-5 VALUES OF $2\tilde{\sigma}$

p	$2\tilde{\sigma}$
.50	.061
.40	.060
.30	.059
.20	.049
.15	.044
.10	.037
.05	.027
.01	.012

We then entered Exhibit B-5 with the value nearer one-half of $\hat{p}_W$ and $\hat{p}_N$ (or $\hat{q}_W$ and $\hat{q}_N$) and decided $\hat{p}_W - \hat{p}_N$ was significant if it exceeded the value in the rightmost column. Items conditioned by the answer to a previous item ("if yes,..." items) are not tested.

APPENDIX C

HEIGHT AND WEIGHT TABLES

Centiles for weight and height were calculated from frequency distributions for males and females, as shown in Exhibits C-1 through C-4. The data were obtained from the 1-percent national sample.

No systematic attempt to analyze these tables has been made. A brief comparison of the centiles presented here with those reported by Stuart and Stevenson (Reference 76) was made. While no attempt to interpret the data is made here, one or two points are noted that seem curious. Weight centiles for the Head Start children, for example, generally run higher for the age range of 3-1/2 to 5, and lower for the range 5-1/2 to 6-1/2 years. This relationship applies both to males and females. The differences are not large, but they are quite consistent. In the case of height, the Head Start centiles are slightly, but consistantly, higher than the others for both sexes.

EXHIBIT C-1 WEIGHT CENTILES - MALES

Age Range (Years and Months)	Centiles(1)					
	3	25	50	75	97	N
3/6 - 3/11	31.4	38.8	40.4	45.9	53.2	55
4/0 - 4/5	30.8	35.0	38.2	42.3	50.6	68
4/6 - 4/11	33.0	38.1	41.3	44.6	57.6	326
5/0 - 5/5	35.5	39.9	43.1	46.5	54.2	380
5/6 - 5/11	36.2	41.6	44.9	48.4	58.1	716
6/0 - 6/5	37.8	42.9	46.7	51.3	60.9	679
6/6 - 6/11	36.8	43.0	47.5	52.1	63.8	197
7/0 and over	35.9	43.0	46.5	52.2	63.7	89

Note: (1) Figures are weights in pounds.

EXHIBIT C-2 WEIGHT CENTILES - FEMALES

Age Range (Years and Months)	Centiles[1] 3	25	50	75	97	N
3/6 - 3/11	29.2	34.0	36.9	40.3	50.2	45
4/0 - 4/5	27.9	34.8	37.5	41.5	54.1	48
4/6 - 4/11	31.4	36.1	39.7	43.5	51.4	311
5/0 - 5/5	33.0	37.7	41.2	44.9	58.6	384
5/6 - 5/11	34.0	40.0	43.1	46.5	57.5	702
6/0 - 6/5	36.0	41.4	45.2	49.6	60.3	619
6/6 - 6/11	34.7	42.2	45.7	49.7	60.8	179
7/0 and over	34.3	40.1	45.3	51.2	63.3	73

Note: (1) Figures are weights in pounds.

EXHIBIT C-3 HEIGHT CENTILES - MALES

Age Range (Years and Months)	Centiles[(1)] 3	25	50	75	97	N
3/6 - 3/11	34.8	41.8	44.5	46.1	48.1	49
4/0 - 4/5	38.5	41.1	42.6	44.8	46.1	61
4/6 - 4/11	40.7	43.0	44.3	45.7	48.6	321
5/0 - 5/5	41.9	44.0	45.4	47.0	49.4	374
5/6 - 5/11	42.5	45.3	46.7	48.2	50.9	719
6/0 - 6/5	43.4	46.2	47.8	49.3	52.3	670
6/6 - 6/11	41.4	46.8	48.5	49.8	52.9	195
7/0 and over	39.6	46.5	48.1	49.9	54.2	87

Note: (1) Figures are heights in inches.

EXHIBIT C-4 HEIGHT CENTILES - FEMALES

Age Range (Years and Months)	Centiles[1] 3	25	50	75	97	N
3/6 - 3/11	36.6	41.6	43.3	44.6	49.8	46
4/0 - 4/5	34.7	40.9	42.6	44.1	48.1	48
4/6 - 4/11	39.9	42.3	43.9	45.4	48.2	306
5/0 - 5/5	40.8	43.5	44.8	46.1	49.3	382
5/6 - 5/11	41.5	44.7	46.3	47.7	50.7	691
6/0 - 6/5	42.3	45.7	47.4	49.0	51.7	615
6/6 - 6/11	42.5	46.1	48.0	49.2	52.9	181
7/0 and over	42.2	45.4	47.9	50.3	52.5	73

Note: (1) Figures are heights in inches.

APPENDIX D

FURTHER DEFINITIONS OF THE POPULATION SERVED

Consideration can be given to the proposition that the family income level used to identify poverty depends on at least two factors: (1) the number of persons in the household, and (2) whether the family is "farm" or "nonfarm." These factors, shown in the table below, have been taken into account in granting funds for 1966 Head Start projects. OEO hopes that 90 percent of the families to be served by Head Start will have incomes below these levels.

Family Income Level by Household Size

Nonfarm Households		Farm Households	
Persons	Family Income	Persons	Family Income
1	$1,500	1	$1,050
2	$2,000	2	$1,400
3	$2,500	3	$1,750
4	$3,000	4	$2,100
5	$3,500	5	$2,450
6	$4,000	6	$2,800
7	$4,500	7	$3,150
Above 7	$5,000	Above 7	$3,500

If we apply the nonfarm scale to Head Start 1965,[1] we get a clearer picture of Head Start's success in reaching the target population. Exhibit D-1 compares the Head Start Families (using the scale above) with the low income families throughout the country.[2] The 1-percent sample

---

[1] Data is not analyzed for nonfarm and farm households. Seven percent of the nation's families are "farm" (1963 Census estimates).

[2] This scale is slightly different from that now used by OEO. See footnote (6) to Exhibit D-1 for explanation.

EXHIBIT D-1 LOW INCOME FAMILIES IN THE UNITED STATES

	U.S. Population(1)			Head Start(2)		
	Total	The Poor(3)	Poverty Rate (%)(4)	Total	The Poor(6)	Poverty Rate (%)
Total Families	47,440,000	7,210,000	15	5,036(5)	2,462	47
Number of Persons in Family	(%)	(%)		(%)	(%)	
2	32	34	16	1	1	48
3	21	14	11	5	1	47
4	20	13	10	13	9	35
5	13	13	15	17	15	41
6	7	9	19	16	17	52
7 or more	7	17	35	42	54	63
N/A	-	-	-	6		

Notes: (1) Based upon 1963 estimates, Orshansky, Mollie, Counting the Poor: Another Look at the Poverty Profile, Social Security Administration, 1965.

(2) Based upon Bureau of Census 1-percent Head Start sample.

(3) The SSA (Social Security Administration) poverty index-economy level (nonfarm). From Orshansky, loc. cit. Family income level by household size. Those coming below this amount are considered impoverished. It is assumed that a farm family would need 40 percent less net cash than a nonfarm family of the same size and composition.

Family size:	
2 persons	$2,000
3 persons	$2,400
4 persons	$3,100
5 persons	$3,700

EXHIBIT D-1 (Continued)

Family size:	6 persons	$4,100
	7 or more persons	$5,100

(4) Poverty rate (%) = Impoverished families/total families.

(5) 26 percent of the 5,036: not answered or unknown.

(6) OEO poverty index (presented and discussed in text) differs slightly from the SSA poverty index. In 1963, it was estimated that the SSA index included 34.6 million as impoverished; the OEO index, 34.5 million (Orshansky, *loc. cit*).
One other problem is comparisons: the OEO index identified poverty levels in $500 increments. For Head Start, it was only necessary that families indicate their income in $1,000 classes (to the $6,000 level; thereafter, the classes were $2,000 intervals). Some adjustment was necessary, therefore, to apply the OEO index to the Head Start data. It was arbitrarily assumed that the median income of families in each $1,000 class was the midpoint. For example, for the 20.8 percent of the families of three earning between $2,000 and $2,900, it was assumed that 10.4 percent earned less than $2,500 (the poverty line).

indicates that 47 percent of the Head Start families had incomes below the poverty line (compared with 38 percent when $3,000 was used as the line). Over 70 percent of the families so identified had six or more persons in the household (see subsection II. C. 2, Exhibit II-23). This is to be compared with the total number of low income families in the country, where only 26 percent have six or more persons in the family.[1]

While Head Start did not reach its goal of 85 percent participation of "poor" families, there was a concentration on the economically deprived. The nation's impoverished families account for 15 percent of the national total; Head Start's low income participants constituted at least 47 percent of the total families served. There was substantial success in reaching a sizable portion of the target population.

---

[1] One-third of the nation's impoverished families have no children. Of the two-thirds with children, only 12 percent have six or more.

APPENDIX E

IQ SCORES OF CULTURALLY DISADVANTAGED CHILDREN WHO WERE TESTED ON MORE THAN ONE INTELLIGENCE TEST

Five investigators had research designs which called for their subjects to be tested with more than one measure of intelligence. For the convenience of the reader, Exhibit E-1 summarizes the intelligence test results in terms of IQ scores.[1] Results are presented for all groups who were Head Start or non-Head Start, but comparable (i. e., all groups who were assumed to be more or less disadvantaged), and on whom more than one IQ score was obtained.

---

[1] Because of the wide variations in ages, only results which were converted from raw scores to IQ scores were used, since the IQ score is derived from chronological age.

EXHIBIT E-1 IQ SCORES OF CULTURALLY DISADVANTAGED CHILDREN TESTED ON MORE THAN ONE INSTRUMENT[1]

Investigator	N	PPVT	DAP	CMMS	S-B	Leiter
Berger	59	83			92	84
Eisenberg	500	68[2]	76			
Eisenberg	23	65.5		83.9	91.3	
Eisenberg	48	70.5		85.9		
Eisenberg	48	76.7		94.8		
Eisenberg	34	69.1		84.8	84.2	
Eisenberg	34	72.8		88.2	90.2	
Johnson	79	72	92			
Johnson	79	79	111			
Johnson	62	55	91			
Johnson	17	91	92			
Ozer	65	74			88.78	
Jacobs and Shafer	56		71.5		85.27	

Notes: (1) These scores are not organized in relation to pre-, post-, age, or other variables.

(2) N = 424, from sample of 500 who received DAP.

APPENDIX F

ANALYSIS OF CDC DIFFERENCES

A question basic to whether different programs produce different results is whether different centers show different results. An attempt to decide whether centers varied for reasons other than chance was made but failed. The failure is, however, interesting for two reasons. First, although differences in improvement means are tenuous, differences in improvement variability are marked and striking. Second, there is significant correlation between the size of mean improvement and its variance, which has strong implications for the design needed to approach the evaluation of center differences.

We chose 15 centers at random from the list of 102 centers that provided one or more of the 134 matched pre- and post-PPVT scores. One of the 15 was then dropped because 17 of the 18 D-scores it reported were zero (the other was one). Exhibit F-1 summarizes the results. The natural logarithm of the estimate of the center variance has approximately a normal distribution with variance $2/(n_j - 1)$, where n_j is the number of D-scores from the jth center. So, for the center of the table this standard deviation (of the variance estimates) is between .408 and one. The hypothesis that the variances of D-scores are the same from center to center is clearly untenable.

The F ratio is 1.08, but even ignoring the unequal variances, there is some difficulty in interpreting its meaning, since we have a situation sometimes differentiated from the usual analysis of variance situation and called Model II. The alternative to the null hypothesis for an analysis of variance by ranks is, however, that at best these centers differ. That hypothesis is of some interest. The value of the chi-square statistic for the rank analysis of variance is 20.97 on 13 degrees of freedom, which is significant at the 7.3-percent level (the mean ranks are given in Exhibit F-1). The analysis of average ranks, then, is at best marginally conclusive.

EXHIBIT F-1 MEANS AND VARIANCES OF PPVT DIFFERENCES FROM 14 CENTERS

Center	Number of D-Scores from Centers	Average D-Score	Variance	$\log_e$ of Variance	Rank of Mean	Rank of Variance	Means of Ranks
138 013	4	-0.25	0.25	-1.39	1	1	12.88
575 001	1	0.00	--	--	--	--	15.00
5011 002	7	1.86	8.80	2.17	2	2	24.43
5209 001	1	2.00	--	--	--	--	28.5
1590 001	4	4.25	35.38	3.57	3	5	33.0
750 001	6	4.67	14.25	2.65	4	3	35.75
985 017	3	6.33	104.36	4.64	5	7	33.83
985 001	12	7.00	127.27	4.84	6	8	36.00
1212 001	8	7.88	163.51	5.10	7	10	36.88
1923 002	4	8.75	28.25	3.34	8	4	47.62
5080 006	5	9.40	679.80	6.52	9	12	53.90
2090 019	13	9.77	74.18	4.31	10	6	47.31
831 019	4	14.25	146.25	4.98	11	9	55.12
2490 003	6	21.67	503.78	6.22	12	11	57.42

The situation revealed here is one in which, as more centers are considered, the spread of the means, if it increases at all, increases with, but more slowly than, the spread of the variance.[1] The efficient solution to this problem is to get more scores per center rather than considering more centers.

---

[1] The correlation between ranks of means and variances is .752, which is significant at a level smaller than .01.

APPENDIX G

WORKER EVALUATION RESPONSES

The exhibit in this appendix gives the frequencies of responses of paid and volunteer workers from the approximately 1-percent sample CDC's to each item on the Paid and Voluntary Workers' Evaluation Form (see Appendix A for a sample of the form). Thus, particular hypotheses about the opinions of different types of workers may be checked by means of this data.

The items are presented in order in the exhibit. For each item, a row identifies the type of worker; a column identifies a response category; and the overall X^2 value is given. All X^2's are significant at the 5-percent level for the appropriate degrees of freedom except those for Items 22 and 23.

It should be noted that the response categories change from one group of items to another and that, for some items, categories have been combined in order that sufficient cell sizes of expected frequencies may be achieved.

The categories of workers represented in each row, from top to bottom, are:

a. Professional Paid and Volunteer
b. Neighborhood Paid
c. Neighborhood Volunteer
d. Other Paid and Volunteer

EXHIBIT G-1 ITEM RESPONSE FREQUENCIES

Item	Very Good	Good	Fair	Poor	Can't Evaluate
1.	a. 1,345	407	40(1)	-	7
	b. 1,126	388	35	-	16
	c. 464	175	3	-	4
	d. 266	127	16	-	4
	$\chi^2 = 35.592$				
2.	a. 713	926	113(1)	-	22
	b. 660	775	93	-	21
	c. 241	338	24	-	24
	d. 164	198	37	-	9
	$\chi^2 = 35.914$				
3.	a. 763	620	272	83	24
	b. 692	586	179	41	35
	c. 303	252	39	6	23
	d. 169	164	49	12	9
	$\chi^2 = 76.745$				
4.	a. 1,085	569	54(1)	-	30
	b. 789	567	72	-	59
	c. 297	246	27	-	34
	d. 180	150	30	-	29
	$\chi^2 = 95.652$				
5.	a. 552	768	314	59	34
	b. 480	697	233	28	41
	c. 170	279	93	9	45
	d. 105	143	78	31	30
	$\chi^2 = 121.327$				
6.	a. 865	558	208	83	-
	b. 811	473	156	17	-
	c. 333	200	53	6	-
	d. 162	131	56	26	-
	$\chi^2 = 79.903$				
7.	a. 566	690	326	105	21
	b. 649	567	189	28	32
	c. 297	219	61	3	10
	d. 125	149	64	14	28
	$\chi^2 = 192.342$				
8.	a. 665	730	226	62	19
	b. 644	617	151	19	29
	c. 262	253	53	6	13
	d. 133	159	53	4	30
	$\chi^2 = 114.44$				

Note: (1) Includes both "fair" and "poor."

EXHIBIT G-1 (Continued)

Item		Very Good	Good	Fair	Poor	Can't Evaluate
9.	a.	613	725	247	92	11
	b.	560	666	157	26	25
	c.	253	251	54	12	11
	d.	133	145	55	25	16
	$\chi^2 = 94.029$					
10.	a.	923	618	63(1)	-	55
	b.	944	405	44	-	33
	c.	392	158	17	-	9
	d.	221	107	16	-	24
	$\chi^2 = 67.685$					
11.	a.	331	713	284	96	194
	b.	301	590	136	15	321
	c.	109	215	56	20	153
	d.	52	118	42	23	114
	$\chi^2 = 208.202$					
12.	a.	854	456	144	66	87
	b.	698	468	99	18	68
	c.	280	174	45	14	35
	d.	161	102	30	11	41
	$\chi^2 = 57.767$					
13.	a.	742	551	182	54	73
	b.	642	502	106	22	67
	c.	268	180	55	10	35
	d.	159	95	31	5	55
	$\chi^2 = 95.102$					
14.	a.	258	452	273	174	421
	b.	291	466	189	75	297
	c.	121	179	83	31	131
	d.	54	94	43	28	123
	$\chi^2 = 85.990$					
15.	a.	157	346	234	291	525
	b.	166	327	172	129	498
	c.	72	131	93	39	204
	d.	33	68	39	44	155
	$\chi^2 = 89.591$					
16.	a.	324	501	258	137	314
	b.	290	396	162	77	349
	c.	105	142	84	29	168
	d.	65	90	50	12	121
	$\chi^2 = 72.717$					
17.	a.	317	612	286	137	172
	b.	285	529	197	59	200
	c.	127	164	88	29	116
	d.	52	112	50	29	92
	$\chi^2 = 110.307$					

Note: (1) Includes both "fair" and "poor."

EXHIBIT G-1 (Continued)

Item	Very Much Worthwhile	Worthwhile	Occasionally Worthwhile and Waste of Time	Not Applicable
18.	a. 1,180	260	44	40
(1)	b. 1,025	217	14	14
	c. 375	98	47	4
	d. 246	65	5	19
	$\chi^2 = 118.690$			
(2)	a. 1,055	327	58	84
	b. 943	259	21	47
	c. 344	122	48	10
	d. 238	69	6	22
	$\chi^2 = 83.468$			
(3)	a. 1,282	214	18	10
	b. 955	273	35	7
	c. 360	113	46	5
	d. 252	66	7	10
	$\chi^2 = 138.617$			
(4)	a. 1,225	280	14	5
	b. 817	416	32	5
	c. 300	178	42	4
	d. 213	97	8	17
	$\chi^2 = 265.234$			
(5)	a. 1,292	220	9	3
	b. 936	304	23	7
	c. 377	102	41	4
	d. 247	64	8	16
	$\chi^2 = 214.108$			
(6)	a. 1,094	349	40	41
	b. 803	341	72	54
	c. 306	153	50	15
	d. 206	91	16	22
	$\chi^2 = 77.775$			
(7)	a. 1,287	229	6	2
	b. 930	292	38	10
	c. 344	130	44	6
	d. 238	74	7	16
	$\chi^2 = 216.764$			
(8)	a. 1,306	206	7	5
	b. 984	262	18	6
	c. 371	115	34	4
	d. 270	56	1	8
	$\chi^2 = 150.943$			

EXHIBIT G-1 (Continued)

Item	Much Better	Better	No Change, Worse, Much Worse
19.	a. 1,112	406	6
	b. 879	381	10
(1)	c. 322	195	7
	d. 193	139	3
	χ^2 = 47.747		
	a. 873	641	10
	b. 560	690	20
(2)	c. 244	273	7
	d. 155	171	9
	χ^2 = 61.679		
	a. 728	756	40
	b. 570	648	52
(3)	c. 210	282	32
	d. 134	177	24
	χ^2 = 30.047		
	a. 762	731	31
	b. 569	667	34
(4)	c. 212	288	24
	d. 137	178	20
	χ^2 = 35.824		
	a. 548	939	37
	b. 366	830	74
(5)	c. 179	308	37
	d. 98	213	24
	χ^2 = 46.081		
	a. 726	776	22
	b. 511	721	38
(6)	c. 222	275	27
	d. 129	193	13
	χ^2 = 39.087		
	a. 1,023	485	16
	b. 767	477	26
(7)	c. 317	198	9
	d. 190	130	15
	χ^2 = 35.737		
	a. 688	814	22
	b. 511	715	44
(8)	c. 216	293	15
	d. 145	180	10
	χ^2 = 17.641		

EXHIBIT G-1 (Continued)

Item	Much Better	Better	No Change, Worse, Much Worse
(9)	a. 1,018	492	14
	b. 818	435	17
	c. 309	203	12
	d. 208	122	5
	χ^2 = 14.994		
20. (1)	a. 616	809	99
	b. 530	665	75
	c. 216	278	30
	d. 124	174	37
	χ^2 = 13.227		
(2)	a. 402	745	377
	b. 373	631	266
	c. 175	251	98
	d. 89	146	100
	χ^2 = 25.086		
(3)	a. 376	815	333
	b. 336	634	300
	c. 157	268	99
	d. 97	152	86
	χ^2 = 14.766		
(4)	a. 362	940	222
	b. 386	719	165
	c. 171	292	61
	d. 100	166	69
	χ^2 = 39.024		
(5)	a. 312	944	268
	b. 304	777	189
	c. 160	292	72
	d. 82	179	74
	χ^2 = 34.343		
(6)	a. 369	926	229
	b. 332	746	192
	c. 167	277	80
	d. 101	172	62
	χ^2 = 19.811		

EXHIBIT G-1 (Continued)

Item	Much More	More	A Little	Not At All
21.	a. 1,082	360	40	11
(1)	b. 855	292	62	17
	c. 326	145	32	6
	d. 197	82	24	7
	$\chi^2 = 38.485$			
	a. 1,065	385	32	8
(2)	b. 796	343	69	9
	c. 313	161	30	3
	d. 198	98	8	6
	$\chi^2 = 48.712$			
	a. 908	484	71	13
(3)	b. 634	449	100	14
	c. 229	205	54	7
	d. 156	109	31	10
	$\chi^2 = 66.663$			
	a. 760	591	90	21
(4)	b. 529	464	159	26
	c. 200	193	77	17
	d. 132	123	36	11
	$\chi^2 = 73.484$			
22.	a. 1,377	71	4	1
	b. 1,116	51	6	0
	c. 453	27	3	1
	d. 278	20	1	1
	$\chi^2 = 8.668$			
23.	a. 1,266	146	22	12
	b. 1,038	97	18	13
	c. 413	53	9	6
	d. 250	38	8	4
	$\chi^2 = 10.321$			

APPENDIX H

ADDITIONAL HEAD START STUDIES

Reports of studies received after 15 March 1966 are included here. These studies fall into three broad categories: follow-up studies of Head Start children into kindergarten or first grade, a test-reliability study, and studies of language development and/or reading readiness.

A. Follow-Up Studies

On 10 March 1966, a letter asking for reports on follow-up evaluations of participating children was sent from the Head Start Research and Evaluation Division, headed by Dr. Edmund G. Gordon, to a number of agencies which had sponsored Head Start programs during the summer of 1965.

Of the 18 respondents, 7 indicated that no follow-up program had been undertaken, and 11 indicated that a variety of kinds of follow-up activities had been performed. Follow-up testing in cognitive areas (intelligence testing and academic testing) was reported by five agencies; follow-up medical and dental examinations and treatments were specified by six agencies; social/emotional ratings and evaluations were included in follow-up work by six agencies; and extended parent programs were mentioned by three agencies.

Typical examples of specific follow-up measures included:

- Purchasing clothes for all children who needed them to start the fall school year (Reference 117).
- Providing at least one balanced meal per day for each child (Reference 117).
- Continuing parents' programs (Reference 117).
- Making home visits to obtain parents' reactions to children's progress in school (References 118, 120).
- Using behavioral checklists for evaluation, including specific capabilities such as shoe-tieing, balancing, etc. (References 118, 119).

- Administering psychological tests to children who had been referred by teachers for special study (Reference 119).
- Contracting with psychiatrists to help children who need further assistance in adjustment to school life (Reference 119).
- Establishing cumulative folders to include Head Start information (Reference 120).
- Continuing teacher in-service training in art and music (Reference 120).
- Administering Peabody Picture Vocabulary Tests as part of a 1966 year-round Head Start program (Reference 120).

While the respondents usually did not include actual data concerning the measurement made on the children, one respondent from a Texas school system (Reference 121) specified that, of the 54 children in the summer 1965 Head Start program, 45 are enrolled locally in the first grade. Of these children, 50 percent are making normal progress with 25 percent considered "excellent"; 25 percent are not doing as well as average. The report states:

> This would have little significance were it not understood that 98 percent of our Latin Americans repeat the first grade. It appears that 30 of the pupils have gained a full year by having 8 weeks of Head Start. Only four were listed as falling behind. Attendance has been very good, with one exception. The number of absences has been an average of 6 days out of 88.

In addition to the above information on follow-up studies, the final report of Van Egmond's OEO-funded independent research study was received (Reference 105). Much of the substance of his final report was presented in his earlier progress report and has been discussed in the first volume of this report (pages IV-110 to IV-113).

Van Egmond's final report describes in considerable detail the use of a "Collaboration Scale for the Analysis of Classroom Teaching Behavior" to obtain descriptions of modes of teaching in eight Head Start classrooms during the summer 1965 program. The "Collaboration Scale" provides for observation of teaching tasks within a framework of three general and seven secondary categories, as follows.

1. Working on content or task
    a. Providing focus
    b. Development of focus
    c. Providing information
    d. Appraising effort
2. Maintaining social order
    a. Setting expectations
    b. Implementing action
    c. Appraising effort
3. Facilitating

The investigators found a wide range of teaching styles and learning opportunities in the eight classrooms, and felt that the "Collaboration Scale" could provide information to help identify teaching styles and learning opportunities for children.

Further new information in Van Egmond's final report concerned performance measures of reading readiness for Head Start and non-Head Start children, all of whom were in the same kindergarten classes. Arrangements had been made to use the American School Reading Readiness Test, Revised Edition, Form X, but many children could not produce scorable results. Thus, the test was rejected and the Metropolitan Readiness Test, Form S was used. The sample tested was composed of 144 children and included 35 Head Start girls, 36 Head Start boys, 41 non-Head Start girls, and 32 non-Head Start boys.

A distinct trend was reported toward higher readiness scores in the non-Head Start children, compared to Head Start children of the same sex. However, none of the differences reported was statistically significant as determined by the t test. Exhibit H-1 summarizes the test results.

According to Van Egmond's report, the clearest indications of differential effects of the Head Start program were seen in the interview responses of kindergarten teachers. Although they tended to see the activity and exploratory behaviors of the Head Start children as classroom management problems, they found that after several weeks of school, the Head Start children had learned to accommodate their behavior to the teachers' expectations.

EXHIBIT H-1 MEAN TOTAL READING READINESS SCORES (VAN EGMOND)

	Girls		Boys	
	Head Start	Non-Head Start	Head Start	Non-Head Start
N	35	41	36	32
Mean Score	37.14	46.00	36.47	45.41

One of Van Egmond's major recommendations (in the final report) concerned the relationship between Head Start and the kindergarten program of the receiving public school system:

> There is a clear need for establishing a meaningful relationship between the Head Start program and the kindergarten program of the receiving public school system. Regardless of the quality of the summer experience for children, a negative or unsympathetic orientation, or sheer lack of information on the part of the teacher who receives the Head Start child will not provide an optimal opportunity for the continued growth of the learner. This could be accomplished by inviting Head Start teachers and staff members to visit kindergarten classrooms in the neighborhood schools and encouraging the kindergarten teachers to visit Head Start classrooms during the summer. A definite need is indicated for providing an orientation for the receiving teacher regarding the program goals and activities of the Head Start centers. Information regarding the needs, experience, and performance of children as perceived by Head Start personnel should also be shared with the receiving teacher to aid in planning for the further development of the child. If the goals of the Head Start program are to be extended and given further development by the public and private school, then improved articulation between the two programs is essential. (Reference 105)

B. Draw-A-Person Test Reliability Study

One of the independent research studies funded by OEO was directed by Dr. Dale B. Harris of Pennsylvania State University (Reference 49) and had as its main purpose the scoring of Goodenough Draw-A-Man pictures to obtain inter-scorer score reliabilities. The calculations from which the reliability correlations were obtained were based upon independent rescorings of 10 percent of the drawings.[1]

---

[1] The number of drawings rescored was not reported.

Inter-Score Reliability

Age of Child	Male Drawing	Female Drawing
4 years, 6 months to 4 years, 11 months	.949	.962
5 years to 5 years, 5 months	.959	.931
5 years, 6 months to 5 years, 11 months	.956	.960
6 years and over	.946	.940
Mixed[1]	.934	.962

C. Language/Reading Readiness Studies

Four of the reports received in time for inclusion in this document were concerned primarily with studies of language development or reading readiness. Dr. Sol Gordon's report on reading readiness programs in Mississippi is discussed first (Reference 42). Next, Dr. Jane Beasley Raph's language research report is discussed (Reference 92). Attention is then given to the observations, findings, and recommendations of Mr. Melvyn Resnick, a linguist and Head Start consultant who observed nine Head Start centers containing a large proportion of non-English speaking children (Reference 122). Finally, some of the findings of Dr. Donald Reiff (University of Rochester), who was contracted by OEO to prepare an in-depth review and analysis of all Head Start studies which dealt with language development, are presented (Reference 123).

Gordon's report on the effectiveness of five different reading readiness programs instituted in Issaquena and Sharkey Counties, Mississippi provided thought-provoking information not so much on the research problems, as on the special problems encountered in establishing a Head Start program in a particular region of the country -- the deep South.

In regard to the study itself, 189 children were pre-tested on the Wide Range Reading Readiness Achievement, the Draw-A-Man, and the Write Own Name tests. Posttest data were obtained on 150 children 7 weeks later. Actual test scores were not yet available.

The five reading readiness programs under investigation are shown in Exhibit H-2.

---

[1] Includes children under 4 years, 5 months and children with unreported ages.

EXHIBIT H-2 EXPERIMENTAL PROGRAMS (S. GORDON)

Program (Materials/Method)	No. of Children Using Program
Allyn and Bacon Reading Readiness	20
Sylvia Ashton Warner	8
Doman and Delacato	20
Allen Linguistic Reading Method	20
Learn A Thon (Golden Books)	20

Although data were not reported, as mentioned above, the investigator commented that the children appeared, in general, to profit most from the Allyn and Bacon method, which emphasized a traditional approach to reading readiness.

One interesting aspect of the study was the use of record players in the homes of the children. An inexpensive record player was purchased and placed in the home of each participating child. Each family received three different educational records each week, and was requested to play each record at least once a day. Discussions with parents indicated that they complied with the request, but data were not reported as to the effects of this in-the-home educational method.

The many political pressures brought to bear on the Head Start staff and participants were discussed in the report, including harrassments by the Ku Klux Klan, job loss by parents of participating children, and the burning down of Head Start facilities.

Raph's report (Reference 92), "Development of a Methodology for Obtaining and Analyzing Spontaneous Verbalizations Used by Pre-Kindergarten Children in Selected Head Start Programs: A Pilot Study" discussed the use of taped transcriptions and narrative descriptions of language samples to obtain spontaneous language data from young children. In addition, a study was made of two approaches for setting up a standard-stimulus for obtaining language samples: (1) simple, structured devices, and (2) semi-controlled free-play situations. It was not possible, at the conclusion of the study, to make a clear-cut recommendation for either approach, since the results (i.e., the effectiveness of the approaches) varied with the individual children, the researchers involved, and certain temporal factors.

Because of the many problems encountered in typing the language samples from the taped transcriptions, the methodologies for language analysis had not yet been completed; however, the investigators submitted some preliminary suggestions of factors which might be considered in attempts to analyze language samples. These included: length of sentences, verb tense, proportion of parts of speech to total output, variety of vocabulary, concept formation, cognitive development, internal mediation, purpose of the verbal interaction, particular concepts, use of comparatives and superlatives, functional uses of statements, nature of interactions, grammatical errors, articulation omissions, distortions, and substitutions. Each of the foregoing factors was mentioned in terms of the possible indications or clues they might provide concerning differential language development among children.

Resnick (Reference 122) observed nine Head Start classes which were composed of children, teachers, and aides with varying lingual backgrounds. In some classes there were aides who spoke only Spanish to the Spanish-speaking children, while in others the speaking of English only was strongly encouraged.

He found that many teachers were "hampered by the lack of reliable evaluating procedures that would tell them just how much English a child knew, in both productive and receptive aspects." After his observations of and consultations with the staffs at the various centers facing the problems of teaching English, Resnick recommended that native English-speaking and non-English speaking children should be placed in the same classes, with a strong predominance of English-speaking children to serve as language models.

In his summary and recommendations, Resnick noted his impression that:

> The non-English speaking children who learned the most English in the eight weeks were those whose teachers and staff spoke to them in English. A rather obvious point, but since so many of the teachers, aides, and volunteers spoke the children's native language to them, it bears watching and correction in future Head Start programs.
>
> Children who are largely self-sufficient, introverted perhaps...will require a type of program and attention that the more aggressive Spanish-speaking children do not need, if they are to learn English as rapidly as other children. With such children a specially trained staff is probably necessary. The staff's ability and willingness (and will power) to speak English to all the children is...crucial.

After reviewing all Head Start studies which concerned language development, Reiff (Reference 123) stated in his report: "It is only one indication of the complexity and consequent difficulty of such assessment, and of the magnitude of the failure of attempts to do such assessment, that not one shred of systematically gathered, linguistically interesting data is available in any of the 1965 research project reports."

Reiff suggested that Caldwell's Preschool Inventory could be used to obtain information about the children's receptive and expressive verbal reservoirs, and that the Inventory might be meaningfully scored in such a way as to extract this linguistic information.

Although some investigators had seen the Peabody Picture Vocabulary Test as a possible measure of verbal ability, Reiff felt that, because of the problems of intelligibility across dialects: "the Peabody Picture Vocabulary Test, as a test of receptive language ability, is... less than worthless."

Reiff indicated that, at the conclusion of various language studies, there was a heightened awareness on the part of the various investigators as to the difficulties inherent in gathering data on children's language. His report concluded with a number of suggestions for improving further research efforts in the language development of young children. The recommendations concerned data-gathering techniques ("systematic, exhaustive observation techniques," though not developed, are needed and recommended by the author); listings of populations from which data should be gathered for comparative purposes; the identification of expert teachers for use as models; and the development of regional centers for providing language training facilities and consultants to teachers.

APPENDIX I

THE PRESCHOOL INVENTORY AND BEHAVIOR INVENTORY

In this appendix, we shall summarize the results of analyses of differences and regressed differences for the Preschool Inventory (PSI) and Behavior Inventory (BI) matched scores from the 1-percent sample. The statistical analyses and tests made for each test were the same as those made for the PPVT (see Appendix B) and will not be described again here. However, the scoring system used for each test (and their subtests) will be described in some detail. We shall also present the results of an analysis of intertest relationships.

A. The Preschool Inventory (PSI)

The original version of the PSI--the version used in the Summer 1965 Head Start program--consisted of 161 items constructed by Dr. Bettye M. Caldwell (Reference 13). A number of factors influenced the construction of the test, but basically, "It was decided to concentrate on specific achievements representing what the child brought with him to the educational experience rather than on broad areas of cognitive functioning that might predict how well he would do in the future."[1] Thus, the original intent was to make the Inventory more of an educational (achievement) test than a psychological (ability) one. In the author's words, it should be "interpreted as a measure of performance rather than potential."[1] A copy of the test is presented in Appendix A of this volume. The scoring weight for each item, provided by Caldwell, is listed in Exhibit I-1. In the scoring of tests in the 1-percent sample, Item 3 (the Draw-A-Man/Woman item) was omitted; thus, the total possible score for the PSI in this analysis is 293.

Exhibit I-1 also shows the groupings of items according to intended subtests. (The subtest to which a given item belongs is identified by a

---

[1] Loc. cit., page 3.

EXHIBIT I-1 PRESCHOOL INVENTORY SUBTESTS AND ITEM SCORES

Item No.	Subtest	Response	Score	Factor Category
1-2	1	yes	2	III
		no	0	
3	5	human figure drawings	N/A	-
4-7	1	yes	2	-
		no	0	
9-10	1	3 or more names	2	-
		1 or 2 names	1	
		none	0	
11-20	1	gives name	2	III
		shows	1	
		wrong or does not know	0	
21-35	2	right	1	IA
		wrong	0	
36	2	counts to 4 or 5	2	IA
		counts to 2 or 3	1	
		counts to 1 or less	0	
37	1	shows correctly	1	-
		does not show	0	
38	2	knows	1	IA
		does not know	0	
39-42	2	right	1	IA
		wrong	0	
43-47	2	right	2	IA
		wrong	0	
48-51	2	right	1	IV
		wrong	0	
52-55	1	gives name	2	IB
		points	1	
		wrong or does not know	0	
		gives similar object	0	
56	5	correct reproduction of line	2	-
57	5	correct reproduction of circle	4	-
58	5	correct reproduction of square	6	-
59	5	correct reproduction of triangle	8	-
60-90	3	right	1	III, IB
		wrong	0	

EXHIBIT I-1 (Continued)

Item No.	Subtest	Response	Score	Factor Category
91	1	10 or more responses	4	IB
		7 to 9 responses	3	
		4 to 6 responses	2	
		1 to 3 responses	1	
		0 responses	0	
92-99	3	names right	2	IB
		gives right	1	
		gives wrong	0	
		names wrong	0	
100-105	3	says right	2	IB
		points right	1	
		points wrong	0	
		says wrong	0	
106-110	3	says right	2	IV
		shows right	1	
		says or shows wrong	0	
111-123	4	2	2	IV
		1	1	
		wrong or does not know	0	
124-134	6	each part of the response that is correct; i.e., score per item may range from 0 to 4	1	III
135-142	4	function	2	IV
		association	1	
		wrong or does not know	0	
143-148	5	yes	2	-
		no	0	
149-161	7	yes	3	-
		no	0	

Subtest Name	Total Points
1 - Basic Information and Vocabulary	49
2 - Number Concepts and Ordination	36
3 - Concepts I: Size, Shape, Motion, and Color	57
4 - Concepts II: Time, Object Class, and Social	42
5 - Visual Motor	32
6 - Following Instructions	38
7 - Independence and Self-Help	39
	293

EXHIBIT I-1 (Continued)

Factor Category	No. of Items
Factor IA - Concept Activation, Numerical	19
Factor IB - Concept Activation, Sensory	19
Factor III - Personal-Social Responsiveness	26
Factor IV - Associative Vocabulary	21
Total	85

letter on the left-hand side of the exhibit.) As the PSI was originally constructed and scored by Caldwell, there were seven subtests, the names of which are listed at the end of the exhibit.

Caldwell and Soule (Reference 13) analyzed a sample of pretest scores. Exhibit I-2 presents the means and standard deviations of the standardization sample reported by the authors, and Exhibit I-3 gives the subtest/total test correlations which they obtained. On the basis of (1) these score correlations, (2) a factor analysis of items, and (3) an item difficulty analysis, Caldwell selected a set of 85 items representing four factors and a range of item difficulties for each factor group.[1] This set of items constitutes a revised Preschool Inventory, to be used in research and evaluation of the 1966 Head Start programs. We have identified the sets of items representing the highest factor loadings of a given factor in Exhibit I-1 with Roman numerals on the right-hand side of the exhibit. Not all of the items in some rows are necessarily used in a factor group. However, the identification serves in a general way to indicate groupings of items in the revised PSI. The scoring weights of items on the revised PSI are, with a few exceptions, 1 for right and 0 for wrong.

We have, as stated earlier, made the same analyses of the PSI as were performed with the PPVT; that is, we have examined both gain (D) scores (absolute differences), and adjusted ($\hat{a}$) mean scores, or what we have called regressed differences (see Appendix B). For each set of PSI scores, we have made analyses based on various socio-economic factors, which constitute a subset of those used for the analysis of PPVT scores.

Exhibit I-4 shows the results obtained for the zero-factor distributions of matched (pre- and post-) total and subtest scores for the original PSI. The first column on the left identifies the name of each subtest (the top row refers to total test scores). The next column gives the number of subjects (N) in the 1-percent sample for whom matched

---

[1] There were some modifications of the items themselves.

EXHIBIT I-2 RESULTS OF PRESCHOOL INVENTORY - SAMPLE OF HEAD START CHILDREN(1) (CALDWELL)

The 161 test items were intended to measure a child's performance in the following areas: basic information and vocabulary; number concepts and ordination; concepts of size, shape, motion, and color (I); concepts of time, object class, and social function (II); visual-motor performance; the following of instructions; and independence and self-help. Means and standard deviations for the preliminary standardization sample of Head Start children were:

Area	N	Mean	Standard Deviations
Information and vocabulary	387	35.57	7.61
Numerical relations	389	23.78	6.85
Concepts I	389	40.51	11.25
Concepts II	374	27.29	7.94
Visual-motor	389	31.28	10.80
Following of instructions	389	30.38	5.70
Independence and self-help	389	31.30	7.46
Total	372	219.65	44.68

Note: (1) From Reference 13.

EXHIBIT I-3 INTERCORRELATIONS AMONG SUBTESTS OF THE PRESCHOOL INVENTORY[1] (CALDWELL)

(N for correlations ranges from 171 to 302)

	COUNT	CONC 1	CONC 2	VISMO	FOLIN	INDEP	TOTAL
VOCAB[2]	.68	.75	.69	.54	.56	.35	.86
COUNT		.78	.65	.58	.56	.40	.87
CONC 1			.73	.66	.57	.36	.93
CONC 2				.46	.50	.33	.84
VISMO					.40	.40	.72
FOLIN						.26	.68
INDEP							.44

Notes: (1) From Reference 13.

(2) VOCAB is subtest "Basic Information and Vocabulary."
COUNT is subtest "Number Concepts and Ordination."
CONC 1 is subtest "Concepts I."
CONC 2 is subtest "Concepts II."
VISMO is subtest "Visual-Motor Performance."
FOLIN is subtest "Following Instructions."
INDEP is subtest "Independence and Self-Help."

EXHIBIT I-4 COMPARISON OF PRESCHOOL INVENTORY (PSI) SCORES (NATIONWIDE)

	Test	N	Pretest Mean ($\overline{X}$)	Pre-Post Difference ($\overline{D}$)	Regressed Difference ($\overline{a}$)	s_X	$\hat{\sigma}_Y$	$\hat{\sigma}_D$	$\sigma_{\hat{a}}$	$r_{X,Y}$
1.	Total	423	208.82	12.31*(1)	97.66	51.94	49.29	44.03	38.61	.62
2.	Information and vocabulary	423	34.98	2.76*	19.22	9.11	8.71	8.42	7.26	.55
3.	Numerical relations	422	22.56	1.83*	10.48	7.47	7.56	6.65	6.00	.61
4.	Concepts I (size, shape, color)	422	40.06	1.74*	16.65	12.55	12.30	10.54	9.45	.64
5.	Concepts II (time, social function)	420	26.70	1.55*	12.89	9.07	9.14	8.44	7.52	.57
6.	Visual-motor	422	24.58	1.21*	13.11	7.99	7.41	7.27	6.16	.56
7.	Following instructions	422	29.79	.69*	17.65	7.86	7.94	8.46	7.19	.43
8.	Independence-self help	422	30.87	2.50*	31.12	9.56	7.38	11.74	7.33	.12

Note: (1) An asterisk (*) indicates $p < .05$.

scores could be obtained for each subtest. The third column lists the pretest mean ($\overline{X}$) for each test. The next columns list, respectively, the mean gain score ($\overline{D}$) for each test, and the adjusted or regressed differences ($\hat{\alpha}$) for each test. Standard deviations for X , Y , D , and $\hat{\alpha}$ are given in the next four columns, and the last column to the right lists the correlation coefficients for pretest and posttest scores of each test. All mean gains are positive and significant at the 5-percent level, although the gain for the Following Instructions subtest is marginal ($p = .0465$).

Exhibit I-5 summarizes the results of 1-factor analyses of total PSI scores. This exhibit presents, in compact format, the same information (except for differences in order or arrangement between posttest means) that is presented in the 1-factor tables of PPVT results (see Section IV of the first volume of this report). This exhibit, however, presents all factors in a single exhibit, rather than in separate exhibits for each factor. The first column lists factor names and levels, and the second column, sample sizes for each group. The third column shows the pretest mean ($\overline{Y}$) for each factor level, as well as the unweighted average for the whole group classified by the factor indicated. The next column lists the mean gain score ($\overline{D}_j$) for the group named by the jth level of the factor. The next column gives the adjusted mean or regressed difference score ($\hat{\alpha}_j$) for each group, and also the unweighted average for the factor group as a whole.

The columns following list differences of various types. The column labeled $\overline{X}_j - \overline{X}_k$ gives the differences between pretest means for groups or levels within a factor classification. The subscripts j and k refer to different levels of a factor. For example, for the age factor, there are three levels: "over 5," "5," and "under 5." The $\overline{X}_j - \overline{X}_k$ difference in the "over 5" row is the difference between level a and level b--that is, the pretest mean of the "over 5" group minus the pretest mean of the 5-year-old group. The $\overline{X}_j - \overline{X}_k$ difference in the row labeled "5" is the difference in pretest means of the 5-year-olds (b) and the under 5-year-olds (c). The difference in the row labeled "under 5" is the difference between the over 5-year-olds (a) and the under 5-year-olds (c). For the 3-level groups, the descending order in the $\overline{X}_j - \overline{X}_k$

EXHIBIT I-5 COMPARISON OF PSI TOTAL SCORES BY FACTOR CATEGORIES

FACTOR AND LEVEL	N	Pretest Mean ($\bar{X}$)	$\bar{D}_j$	$\hat{a}_j$	$\bar{X}_j - \bar{X}_k$	$\hat{a}_j - \hat{a}_k$	$\bar{X}_j - \bar{X}$	$\hat{a}_j - \hat{a}$	$\bar{D}_j - \bar{D}_k$	$\bar{D}_j - \bar{D}$
1. AGE										
a. Over 5	143	225.28	10.48*(1)	102.59	21.63*	5.78	20.92*	5.38	-3.07	-3.17
b. 5	210	203.65	13.54*	96.82	19.50*	4.58	- .71	- .40	-3.39	- .11
c. Under 5	58	184.16	16.93*	92.23	41.12*	10.36	-20.21*	-4.98	-6.46	3.28
Unweighted Average		204.36	13.65*	97.21						
2. SEX										
a. Male	192	212.38	9.64*	96.48	6.26	- 2.16	3.13	-1.08	-4.72	-2.36
b. Female	166	206.12	14.37*	98.65			- 3.13	1.08		2.36
Unweighted Average		209.25	12.00*	97.56						
3. RACE										
a. White	204	215.31	11.21*	96.48	3.94	- 2.16	1.97	-1.08	-1.32	- .66
b. Negro	216	211.38	12.53*	98.65			-1.97	1.08		.66
Unweighted Average		213.35	11.87*	97.56						
4. FAMILY INTACTNESS										
a. Both Parents	286	207.48	12.92*	97.75	- 2.62	2.43	-10.73	-1.75	3.50	2.64
b. Mother Only	68	210.10	9.41*	95.32	-26.95	-10.11	- 8.11	-4.18	.91	- .86
c. Father Only	18	237.06	8.50	105.43	-29.58	- 7.68	18.84	5.93	4.42	-1.78
Unweighted Average		218.21	10.28*	99.50						
5. FAMILY INCOME										
a. Less than $3,000	80	208.13	8.10*	93.20	- .86	- 5.54	- .43	-2.77	-5.20	-2.60
b. $3,000 or More	343	208.98	13.29*	98.74			.43	2.77		2.60
Unweighted Average		208.55	10.70*	95.97						
6. URBANIZATION										
a. Urban	295	207.00	10.07*	94.71	-11.03	-10.26*	- 5.52	-5.13*	-5.74	-2.87
b. Rural	87	218.03	15.82*	104.97			5.52	5.13*		2.87
Unweighted Average		212.52	12.94*	99.84						

Note: (1) An asterisk (*) indicates $P < .05$

column is always a - b , b - c , and a - c . Similarly, the column labeled $\hat{\alpha}_j - \hat{\alpha}_k$ gives the differences of adjusted (regressed) differences from each other and in the same order as for the $\overline{X}_j - \overline{X}_k$ differences.[1]

The column labeled $\overline{X}_j - \overline{X}$ gives the differences of the factor level pretest means from the unweighted average of factor group means. The $\hat{\alpha}_j - \hat{\alpha}$ column gives this same difference for the adjusted differences. The final two columns of statistics show the differences of differences for each factor level from each other (in the same a - b , b - c , a - c order as before) and from the total unweighted average difference ($\overline{D}$) for the factor group. An asterisk (*) in all cases indicates a significant difference or contrast at the .05 level.

Examination of Exhibit I-5 reveals that, aside from the number of $\overline{D}_j$ scores that were significantly different from zero, as expected, there were only two factors which had significant differences. There was a significant difference in pretest performance as a function of age, with the youngest children having the lowest scores and the oldest having the highest ones. The two extreme pretest means (for "over 5" and "under 5") also differed from the total unweighted mean. That is, they were significantly different from a group mean of zero. However, there were no differential effects observed for the different age groups on either dependent variable. That is, no group made significantly more or less gain than the others. The youngest children did make greater absolute gains than the older children. Nevertheless, it is not possible to accept the hypothesis that any of the observed clusters of differences or changes belong to a different population of differences from the others for this sample. (The reader will recall that there was a significant difference between the adjusted or regressed differences of differences of PPVT scores for the age classification.)

---

[1] In some exhibits, the $\overline{X}_j - \overline{X}_k$ has been omitted from the text for 2-level factors. The values are simply double those for the $\overline{X}_j - \overline{X}$ values, and a significance indication applies to both statistics wherever an asterisk (*) is shown. The same relationship applies to those $\hat{\alpha}_j - \hat{\alpha}_k$ and $\overline{D}_j - \overline{D}_k$ values that have been omitted.

The other factor classification in which a significant difference occurred is Urbanization. As with PPVT measures, the rural children scored higher on the pretest of the PSI, although not significantly so. However, on the PSI, the urban children also appear to have made less gain than expected, as measured by adjusted or regressed differences. This result is comparable in nature to that obtained with the PPVT when scores were classified by the age of the child (see Exhibit IV-9 of the first volume of this report). It is true, however, that the data can also be interpreted to mean that the rural children in this sample gained or improved significantly more than the urban and suburban children on the total achievement test. This hypothesis is supported particularly by examination of the pretest means and the change scores. In any case, it may be concluded that when PSI total scores are grouped according to where the child lives, there is, for the covariance measure, a main effect attributable to the characteristic and a differential effect of the treatment.[1]

Otherwise, as may be seen in Exhibit I-5, there were no significant differences associated with factor classifications. Trends in pretest means and change scores were similar to those found with the PPVT. Whites scored higher than Negroes; males scored higher than females; the higher income group scored higher than the lower one, etc.

Exhibits I-6 through I-12 present analyses of each of the PSI subtests. We shall not comment on each table in detail. The results are, in general, the same as those found for the PSI total scores. The following points, however, are worth particular attention.

---

[1] We have throughout interpreted significant differences in distributions of differences of differences to imply a differential effect of Head Start treatment on the subgroups involved in the analysis. There are, of course, alternative interpretations. The interpretation made here, however, seems most useful or feasible to us in the interest of illuminating results and future research implications and directions.

EXHIBIT I-6 COMPARISON OF PSI SCORES BY FACTOR CATEGORIES - SUBTEST 1: INFORMATION AND VOCABULARY

FACTOR AND LEVEL	N	Pretest Mean ($\overline{X}$)	$\overline{D}_j$	$\hat{a}_j$	$\overline{X}_j - \overline{X}_k$	$\hat{a}_j - \hat{a}_k$	$\overline{X}_j - \overline{X}$	$\hat{a}_j - \hat{a}$	$\overline{D}_j - \overline{D}_k$	$\overline{D}_j - \overline{D}$
1. AGE										
a. Over 5	134	37.61	2.87*(1)	20.57	3.63*	1.59	3.26*	0.94	-0.12	-0.59
b. 5	181	33.98	2.99*	18.98	2.53	-0.34	-0.37	-0.64	-1.53	-0.47
c. Under 5	42	31.45	4.52*	19.32	6.16*	1.25	-2.90*	-0.30	-1.65	1.06
Unweighted Average	-	34.35	3.46*	19.63	-	-	-	-	-	-
2. SEX										
a. Male	177	35.29	2.73*	19.34	0.18	-0.30	0.09	-0.15	-0.38	-0.19
b. Female	188	35.11	3.11*	19.63	-0.18	0.30	-0.09	0.15	0.38	0.19
Unweighted Average	-	35.20	2.92*	19.48	-	-	-	-	-	-
3. RACE										
a. White	167	35.63	2.75*	19.51	-0.24	-0.72	-0.12	-0.36	-0.60	-0.30
b. Negro	152	35.88	3.36*	20.24	0.24	0.72	0.12	0.36	0.60	0.30
Unweighted Average	-	35.75	3.06*	19.88	-	-	-	-	-	-
4. FAMILY INTACTNESS										
a. Both Parents	257	34.70	3.07*	19.40	-1.65	0.39	-2.04	0.21	0.82	1.17
b. Mother Only	59	36.36	2.25*	19.36	-2.83	0.55	-0.39	0.17	1.88	0.35
c. Father Only	16	39.19	0.38	18.81	-4.48	0.59	2.44	-0.38	2.70	-1.52
Unweighted Average	-	36.75	1.90*	19.19	-	-	-	-	-	-
5. FAMILY INCOME										
a. Less than $3,000	75	35.59	1.77*	18.52	0.62	-1.24	0.31	-0.62	-1.54	-0.77
b. $3,000 or More	294	34.97	3.31*	19.76	-0.62	1.24	-0.31	0.62	1.54	0.77
Unweighted Average	-	35.28	2.54*	19.14	-	-	-	-	-	-
6. URBANIZATION										
a. Urban	263	35.04	2.47*	18.95	-0.28	-2.02*	-0.14	-1.01*	-1.90	-0.95
b. Rural	83	35.33	4.36*	20.98	0.28	2.02*	0.14	1.01*	1.90	0.95
Unweighted Average	-	35.18	3.41*	19.97	-	-	-	-	-	-

Note: (1) An asterisk (*) indicates $P < .05$.

EXHIBIT I-7 COMPARISON OF PSI SCORES BY FACTOR CATEGORIES - SUBTEST 2: NUMERICAL RELATIONS

FACTOR AND LEVEL	N	Pretest Mean ($\bar{X}$)	$\bar{D}_j$	$\hat{a}_j$	$\bar{X}_j - \bar{X}_k$	$\hat{a}_j - \hat{a}_k$	$\bar{X}_j - \bar{X}$	$\hat{a}_j - \hat{a}$	$\bar{D}_j - \bar{D}_k$	$\bar{D}_j - \bar{D}$
1. AGE										
a. Over 5	127	24.82	1.65*(1)	11.16	3.37*	0.52	2.87*	0.63	-0.77	-0.46
b. 5	178	21.45	2.43*	10.64	1.87*	0.87	-0.50	0.12	0.15	0.15
c. Under 5	40	19.58	2.28*	9.77	5.24*	1.39	-2.37*	-0.75	-0.62	0.30
Unweighted Average	-	21.95	2.15*	10.52	-	-	-	-	-	-
2. SEX										
a. Male	170	23.39	1.99*	10.95	1.56	0.56	0.78	0.28	-0.04	-0.02
b. Female	183	21.84	2.03*	10.40	-1.56	-0.56	-0.78	-0.28	0.04	0.02
Unweighted Average	-	22.62	2.01*	10.67	-	-	-			-
3. RACE										
a. White	161	24.30	1.64*	10.95	2.86*	0.26	1.43*	0.13	-0.82	-0.41
b. Negro	147	21.45	2.47*	10.68	-2.86*	-0.26	-1.43*	-0.13	0.82	0.41
Unweighted Average	-	22.88	2.05*	10.82	-	-	-	-	-	-
4. FAMILY INTACTNESS										
a. Both Parents	247	22.54	2.43*	11.06	-0.11	1.27	-1.21	0.67	1.31	1.13
b. Mother Only	57	22.65	1.12	9.80	-3.42	-0.52	-1.10	-0.59	0.79	-0.17
c. Father Only	15	26.07	0.33	10.32	-3.52	0.75	2.31	-0.08	2.10	-0.96
Unweighted Average	-	23.75	1.30*	10.39	-	-	-	-	-	-
5. FAMILY INCOME										
a. Less than $3,000	72	21.35	2.00*	10.18	-1.54	-0.62	-0.77	-0.31	-0.04	-0.02
b. $3,000 or More	284	22.89	2.03*	10.80	1.54	0.62	0.77	0.31	0.16	0.02
Unweighted Average	-	22.12	2.02*	10.49	-	-	-	-	-	-
6. URBANIZATION										
a. Urban	253	21.98	1.76*	10.18	-2.34	-1.84*	-1.17	-0.92*	-.96	-0.48
b. Rural	84	24.32	2.71*	12.01	2.34	1.84*	1.17	0.92*	.96	0.48
Unweighted Average	-	23.15	2.24*	11.10	-	-	-	-	-	-

Note: (1) An asterisk (*) indicates $P < .05$.

EXHIBIT I-8 COMPARISON OF PSI SCORES BY FACTOR CATEGORIES - SUBTEST 3: CONCEPTS I

FACTOR AND LEVEL	N	Pretest Mean ($\bar{X}$)	$\bar{D}_j$	$\hat{a}_j$	$\bar{X}_j - \bar{X}_k$	$\hat{a}_j - \hat{a}_k$	$\bar{X}_j - \bar{X}$	$\hat{a}_j - \hat{a}$	$\bar{D}_j - \bar{D}_k$	$\bar{D}_j - \bar{D}$
1. AGE										
a. Over 5	124	43.40	0.90	17.06	3.05	0.73	4.66*	0.80	-0.41	-0.93
b. 5	173	40.34	1.312	16.34	7.86*	0.96	1.60	0.08	-1.97	-0.52
c. Under 5	42	32.48	3.29*(1)	15.38	10.92*	1.68	-6.26*	-0.88	-2.38	1.45
Unweighted Average	-	38.74	1.83*	16.26	-	-	-	-	-	-
2. SEX										
a. Male	177	39.25	2.07*	16.69	-	-	-0.36	-0.11	-	0.02
b. Female	177	39.97	2.03*	16.91	-	-	0.36	0.11	-	-0.02
Unweighted Average	-	39.61	2.05*	16.80	-	-	-	-	-	-
Unweighted Aver										
3. RACE										
a. White	154	42.98	0.89	16.89	-	-	2.05*	-0.10	-	-0.87
b. Negro	151	38.88	2.62*	17.10	-	-	-2.05*	0.10	-	0.87
Unweighted Average	-	40.93	1.76*	17.00	-	-	-	-	-	-
4. FAMILY INTACTNESS										
a. Both Parents	248	39.54	2.08*	16.81	-1.44	1.28	-2.75	0.20	1.82	1.23
b. Mother Only	57	40.98	0.26	15.53	-5.37	-1.95	-1.31	-1.08	0.07	-0.59
c. Father Only	14	46.36	0.21	17.48	-6.81	-0.67	4.06	0.87	1.87	-0.64
Unweighted Average	-	42.29	0.85	16.60	-	-	-	-	-	-
5. FAMILY INCOME										
a. Less than $3,000	73	39.58	0.21	14.94	-	-	-0.26	-1.08	-	-0.98
b. $3,000 or More	281	40.10	2.17*	17.10	-	-	0.26	1.08	-	0.98
Unweighted Average	-	39.84	1.19*	16.02	-	-	-	-	-	-
6. URBANIZATION										
a. Urban	256	38.95	1.70*	16.20	-	-	-1.86*	-0.83	-	-0.14
b. Rural	81	42.67	1.98*	17.86	-	-	1.86*	0.83	-	0.14
Unweighted Average	-	40.80	1.84*	17.03	-	-	-	-	-	-

Note: (1) An asterisk(*) indicates $P < .05$.

EXHIBIT I-9 COMPARISON OF PSI SCORES BY FACTOR CATEGORIES - SUBTEST 4: CONCEPTS II

FACTOR AND LEVEL	N	Pretest Mean ($\bar{X}$)	$\bar{D}_j$	$\hat{a}_j$	$\bar{X}_j-\bar{X}_k$	$\hat{a}_j-\hat{a}_k$	$\bar{X}_j-\bar{X}$	$\hat{a}_j-\hat{a}$	$\bar{D}_j-\bar{D}_k$	$\bar{D}_j-\bar{D}$
1. AGE										
a. Over 5	126	29.01	1.38*(1)	13.70	3.16*	1.22	2.73*	0.86	-0.12	-0.30
b. 5	178	25.86	1.51*	12.49	1.88	0.16	-0.42	-0.35	-0.64	-0.[illegible]7
c. Under 5	41	23.98	2.15	12.32	5.04*	1.38	-2.31	-0.51	-0.77	0.46
Unweighted Average	-	26.28	1.68*	12.84	-	-	-	-	-	-
2. SEX										
a. Male	175	27.09	1.25*	12.75	-	-	0.16	-0.14	-	-0.21
b. Female	177	26.77	1.67*	13.04	-	-	-0.16	0.14	-	0.21
Unweighted Average	-	26.93	1.46*	12.90	-	-	-	-	-	-
3. RACE										
a. White	155	28.06	0.85	12.77	-	-	0.56	-0.32	-	-0.55
b. Negro	150	26.95	1.96*	13.40	-	-	-0.56	0.32	-	0.55
Unweighted Average	-	27.51	1.41*	13.09	-	-	-	-	-	-
4. FAMILY INTACTNESS										
a. Both Parents	247	26.53	1.43*	12.70	-0.60	0.95	-1.61	-0.37	1.21	0.32
b. Mother Only	58	27.14	0.22	11.75	-3.61	-3.00	-1.00	-1.32	-1.46	-0.89
c. Father Only	16	30.75	1.69	14.75	-4.22	-2.05	2.61	1.68	-0.26	0.57
Unweighted Average	-	28.14	1.11*	13.06	-	-	-	-	-	-
5. FAMILY INCOME										
a. Less than $3,000	72	26.25	1.54	12.69	-	-	-0.39	-0.12	-	0.04
b. $3,000 or More	284	27.00	1.46*	12.93	-	-	0.39	0.12	-	-0.04
Unweighted Average	-	26.63	1.50*	12.81	-	-	-	-	-	
6. URBANIZATION										
a. Urban	256	26.54	1.20*	12.47	-	-	-0.50	-0.48	-	-0.27
b. Rural	83	27.54	1.75*	13.44	-	-	0.50	0.48	-	0.27
Unweighted Average	-	27.04	1.48*	12.96	-	-	-	-	-	

Note: (1) An asterisk (*) indicates $p < .05$.

EXHIBIT I-10 COMPARISON OF PSI SCORES BY FACTOR CATEGORIES - SUBTEST 5: VISUAL MOTOR PERFORMANCE

FACTOR AND LEVEL	N	Pretest Mean ($\bar{X}$)	$\bar{D}_j$	$\hat{a}_j$	$\bar{X}_j-\bar{X}_k$	$\hat{a}_j-\hat{a}_k$	$\bar{X}_j-\bar{X}$	$\hat{a}_j-\hat{a}$	$\bar{D}_j-\bar{D}_k$	$\bar{D}_j-\bar{D}$
1. AGE										
a. Over 5	74	23.35	2.41*(1)	13.72	1.38	1.37096	1.20	1.07	0.70	0.49
b. 5	122	21.97	1.70*	12.35	0.82	0.46138	-0.19	-0.30	0.06	-0.21
c. Under 5	28	21.14	1.64	11.88	2.21	1.83234	-1.01	-0.76	0.76	-0.27
Unweighted Average	-	22.15	1.91*	12.65	-	-	-	-	-	-
2. SEX										
a. Male	106	22.85	1.79*	12.86	-	-	0.48	0.11	-	-0.12
b. Female	121	21.88	2.03*	12.63	-	-	-0.48	-0.11	-	0.12
Unweighted Average	-	22.37	1.91*	12.75	-	-	-	-	-	-
3. RACE										
a. White	99	22.30	2.26*	13.07	-	-	-0.17	0.20	-	0.29
b. Negro	97	22.64	1.69*	12.66	-	-	0.17	-0.20	-	-0.29
Unweighted Average	-	22.47	1.98*	12.86	-	-	-	-	-	-
4. FAMILY INTACTNESS										
a. Both Parents	162	22.12	2.23*	12.95	-0.04	1.43586	-1.12	0.12	1.46	0.66
b. Mother Only	36	22.17	0.78	11.52	-3.26	-2.51657	-1.07	-1.32	-0.94	-0.80
c. Father Only	7	25.43	1.71	14.03	-3.30	-1.08072	2.19	1.20	0.52	0.14
Unweighted Average	-	23.24	1.58*	12.83	-	-	-	-	-	-
5. FAMILY INCOME										
a. Less than $3,000	46	21.96	1.91*	12.55	-	-	-0.17	-0.12	-	-0.04
b. $3,000 or More	184	22.29	1.99*	12.79	-	-	0.17	0.12	-	0.04
Unweighted Average	-	22.13	1.95*	12.67	-	-	-	-	-	-
6. URBANIZATION										
a. Urban	171	22.28	1.87*	12.66	-	-	-0.02	-0.13	-	-0.12
b. Rural	51	22.31	2.11*	12.93	-	-	0.02	0.13	-	0.12
Unweighted Average	-	22.29	1.99*	12.80	-	-	-	-	-	-

Note: (1) An asterisk (*) indicates $p < .05$.

EXHIBIT I-11 COMPARISON OF PSI SCORES BY FACTOR CATEGORIES - SUBTEST 6: FOLLOWING INSTRUCTIONS

FACTOR AND LEVEL	N	Pretest Mean ($\bar{X}$)	$\bar{D}_j$	$\hat{a}_j$	$\bar{X}_j-\bar{X}_k$	$\hat{a}_j-\hat{a}_k$	$\bar{X}_j-\bar{X}$	$\hat{a}_j-\hat{a}$	$\bar{D}_j-\bar{D}_k$	$\bar{D}_j-\bar{D}$
1. AGE										
a. Over 5	117	30.00	0.39	17.47	0.56	0.56	1.49	-0.26	0.23	-1.11
b. 5	173	29.44	0.16	16.92	3.34	-1.89	0.93	-0.82	-3.79*	-1.34
c. Under 5	39	26.10	3.95*(1)	18.81	3.90*	-1.34	-2.41*	1.08	-3.56	2.45*
Unweighted Average	-	28.51	1.50*	17.73	-	-	-	-	-	-
2. SEX										
a. Male	164	29.71	-0.08	16.83	-	-	0.36	-0.43	-	-0.64
b. Female	173	28.98	1.20*	17.70	-	-	-0.36	0.43	-	0.64
Unweighted Average	-	29.34	0.56	17.26	-	-	-	-	-	-
3. RACE										
a. White	149	30.24	0.32	17.54	-	-	0.51	0.06	-	-0.23
b. Negro	141	29.23	0.77	17.41	-	-	-0.51	-0.06	-	0.23
Unweighted Average	-	29.73	0.55	17.48	-	-	-	-	-	-
4. FAMILY INTACTNESS										
a. Both Parents	237	29.00	0.65	17.16	-0.54	-0.15	-1.25	-0.51	0.16	0.20
b. Mother Only	57	29.54	0.49	17.31	-2.66	-1.22	-0.70	-0.36	0.29	0.044
c. Father Only	15	32.20	0.20	18.53	-3.20	-1.37	1.95	0.86	0.45	-0.25
Unweighted Average	-	30.25	0.45	17.67	-	-	-	-	-	-
5. FAMILY INCOME										
a. Less than $3,000	69	28.39	0.49	16.66	-	-	-0.55	-0.38	-	-0.06
b. $3,000 or More	272	29.49	0.61	17.40	-	-	0.55	0.38	-	0.06
Unweighted Average	-	28.94	0.56	17.03	-	-	-	-	-	-
6. URBANIZATION										
a. Urban	250	29.14	0.40	16.99	-	-	-0.27	-0.41	-	-0.26
b. Rural	76	29.67	0.92	17.81	-	-	0.27	0.41	-	0.26
Unweighted Average	-	29.40	0.66	17.4	-	-	-	-	-	-

Note: (1) An asterisk (*) indicates $p < .05$.

EXHIBIT I-12 COMPARISON OF PSI SCORES BY FACTOR CATEGORIES - SUBTEST 7: INDEPENDENCE AND SELF-HELP

FACTOR AND LEVEL	N	Pretest Mean ($\overline{X}$)	$\overline{D}_j$	$\hat{a}_j$	$\overline{X}_j$-$\overline{X}_k$	$\hat{a}_j$-$\hat{a}_k$	$\overline{X}_j$-$\overline{X}$	$\hat{a}_j$-$\hat{a}$	$\overline{D}_j$-$\overline{D}_k$	$\overline{D}_j$-$\overline{D}$
1. AGE										
a. Over 5	71	29.54	4.87*[(1)]	31.55	-0.30	0.73	0.99	0.07	1.00	-0.80
b. 5	129	29.84	3.81*	30.82	3.50	-1.24	1.27	-0.66	-4.41	-1.80
c. Under 5	27	26.33	8.22*	32.06	3.20	-0.51	-2.24	0.58	-3.41	2.60
Unweighted Average	-	28.57	5.62*	31.48	-	-	-	-	-	-
2. SEX										
a. Male	115	30.08	3.34*	30.56	1.26	-0.94	0.63	-0.47	-2.10	-1.05
b. Female	116	28.81	5.43*	31.51			-0.63	0.47		1.05
Unweighted Average	-	29.44	4.39*	31.04			-	-		-
3. RACE										
a. White	106	29.46	4.19*	30.85	-2.84*	-1.28	-1.42*	-0.64	1.28	0.64
b. Negro	94	32.30	2.90*	32.14			1.42*	0.64		-0.64
Unweighted Average	-	30.88	3.55*	31.50			-	-		-
4. FAMILY INTACTNESS										
a. Both Parents	162	29.20	4.31*	30.75	-1.77	-0.21	-0.23	-0.68	1.39	-0.47
b. Mother Only	40	30.98	2.93	30.96	2.85	-1.62	1.54	-0.47	-4.20	-1.86
c. Father Only	8	28.13	7.13*	32.58	1.08	-1.83	-1.31	1.15	-2.81	2.34
Unweighted Average	-	29.43	4.79*	31.43	-	-	-	-	-	-
5. FAMILY INCOME										
a. Less than $3,000	49	31.47	3.06*	31.54	2.60	0.68	1.30	0.34	-1.68	-0.84
b. $3,000 or More	185	28.86	4.74*	30.86			-1.30	-0.34		0.84
Unweighted Average	-	30.17	3.90*	31.20			-	-		-
6. URBANIZATION										
a. Urban	170	29.88	3.58*	30.6	1.20	-1.16	0.60	-0.58	-2.24	-1.12
b. Rural	52	28.67	5.83*	31.78			-0.60	0.58		1.12
Unweighted Average	-	29.27	4.70*	31.20			-	-		-

Note: (1) An asterisk (*) indicates $p < .05$.

- There continued to be significant differences in pretest performance associated with the age of the child, except for two subtests--i.e., Visual-Motor Performance and Independence and Self-Help (Exhibits I-10 and I-12)--although trends in pretest standing as a function of age were about as expected.

- Rural children showed a significant difference in gains as measured by adjusted differences ($\hat{\alpha}$) over the urban/suburban children on the Information/Vocabulary and Numerical Relations subtests, but not on the other five subtests; only on the Concepts I (size, shape, motion, and color) subtest were the pretest means of the rural children significantly higher than those of the urban/suburban children (see Exhibit I-8). However, on most subtests there was a trend toward better initial achievement performance of the rural children.

- Males tended to perform a little better than females on most subtests, although not significantly so. On the Numerical Relations subtest, the difference between male and female pretest means was very close to the .05 bound and could be considered significantly different for purposes of further investigation or research. Males had the only negative D-scores observed so far (see Exhibit I-11). It is interesting to speculate as to why there should have been no significant changes in performance on this subtest for either males or females.

- In general, whites scored higher than Negroes on the pretest. However, on the Independence and Self-Help subtest, the situation was reversed, and Negroes scored significantly higher than whites (see Exhibit I-12).

- With the exception of urban versus rural children noted above, there were no significant differences in the sample analyzed in gains on either measure attributable to a factor classification or a differential effect of the Head Start treatment.

- In light of the emphasis placed on problems of perceptual discrimination among culturally deprived children, it is interesting to note the significant differences among pretest means of different subgroups of children on the Concepts I subtest (see Exhibit I-8). This subtest (according to Caldwell) taps discriminations of shape, size, color, and motion.

B. The Behavior Inventory (BI)

The Behavior Inventory is a set of 50 rating scales, of which 25 refer to positive attributes of children and 25 to negative ones. Ratings of each child were supposed to be completed by teachers in the Summer 1965 Project Head Start at the beginning and end of the program. The BI can provide two sets of scores: (1) an overall adjustment score, and (2) a separate adjustment score for each of nine behavioral categories.

A copy of the Behavior Inventory is presented in Appendix A. Exhibit I-13 shows the items that are included in the positive and negative categories and in the nine behavioral categories. The categories are numbered as they will be numbered in tables to follow. Items were scored on a 4-point scale. For positive items, a rating of "Very Much Like" was given a score of 4. For negative items, that category was given a score of 1. Thus, total adjustment scores could range from 50 (maximum negative) to 200 (maximum positive) if all scales were completed. The range of scores for the various behavioral categories depends, of course, on the number of items in the category.

The same analyses were made of the Behavior Inventory as were made of the PPVT and the PSI, in order to provide a comparable set of measures. Thus, analyses were made of total adjustment scores and of each behavioral category score for those matched (pre/post) forms recoverable in the 1-percent sample.

It is possible to analyze scores for each item in the Behavior Inventory. This was not done for the 1-percent sample data. However, the author of the Operation Head Start Behavior Inventory, Dr. Edward F. Zigler, provided an index of the consistency of raters' responses. A "consistency" or "lie" score can be calculated from the responses to five selected pairs of polar items. The index based on the pairs of items is derived as follows.

EXHIBIT I-13 BEHAVIOR INVENTORY ITEM CATEGORIES[1]

	Dimension	Positive Items (+)	Negative Items (-)
1.	Sociability	33	7
	Cooperation	35	16
	Politeness	38	24
		45	37
2.	Independence	13	4
	Dependence	21	40
		44	41
3.	Curiosity	5	14
	Enthusiasm	30	22
	Exploration	39	32
	Creativity	43	46
4.	Persistence	11	3
		20	28
5.	Emotionality	1	26
		23	36
		31	42
		48	49
6.	Self-Confidence	9	6
		15	18
7.	Jealousy	2	10
	Attention-Seeking	27	19
8.	Achievement	8	17
		25	34
		49	47
9.	Leadership	50	12

Note: (1) Item numbers refer to the items as numbered on the Operation Head Start Behavior Inventory Form (see copy in Appendix A).

For each pair, agreement or disagreement with both items would indicate an inconsistent or nondiscriminatory response. In each case where this occurs, a score of 1 will be given. The range of this score will therefore be from 0 to 5. Under this scoring system, an inconsistent or nondiscriminating set of responses is related to the magnitude of this score--i.e., the higher the score, the greater the inconsistency of the responses.

For each of the five pairs of items, the scoring is as follows:

a. If the (+) item receives a score of 3 or 4 and the (-) item receives a score of 1 or 2, the response to the pair of items is inconsistent and a score of 1 is given.

b. If the (+) item receives a score of 1 or 2 and the (-) item receives a score of 3 or 4, the response to the pair of items is inconsistent and a score of 1 is given.

c. All other combinations indicate that the response to the pair is consistent, and a score of 0 is given.

The five pairs of items are as follows:

(+)		(-)
35	versus	7
44	versus	4
30	versus	22
23	versus	26
25	versus	17

Consistency scores were calculated for each form in the matched sample and correlated with total adjustment scores and with subtests or categories 1 (Sociability), 3 (Curiosity), and 5 (Emotionality).

Exhibit I-14 lists statistics for Behavior Inventory Total Adjustment scores for a sample of 320 matched tests. The tests listed in the left-hand column are:

BI_T : Behavior Inventory Total Adjustment Score
BI_1 : Sociability
BI_2 : Independence
BI_3 : Curiosity

EXHIBIT I-14 COMPARISON OF BEHAVIOR INVENTORY TOTAL ADJUSTMENT AND SUBTEST SCORES

	Test[1]	N	Pretest Mean $\overline{X}$	$\overline{D}$	σ_X	σ_D
1.	BI_T	320	127.67	1.03	14.09	19.83
2.	BI_1	320	22.16	.66*[2]	5.49	5.38
3.	BI_2	320	14.22	- .17	2.83	2.96
4.	BI_3	320	20.86	.93*	5.61	5.40
5.	BI_4	320	9.55	- .49*	2.85	2.34
6.	BI_5	320	22.17	.56	5.11	5.32
7.	BI_6	320	8.60	- .37*	2.63	2.33
8.	BI_7	320	11.12	.04	2.65	2.65
9.	BI_8	320	13.98	- .23	3.16	3.03
10.	BI_9	320	5.01	.10	1.51	1.54

Notes: (1) See text for test and subtest names.

(2) An asterisk (*) indicates $p < .05$.

BI_4 : Persistence
BI_5 : Emotionality
BI_6 : Self-Confidence
BI_7 : Jealousy, Attention-Seeking
BI_8 : Achievement
BI_9 : Leadership

Different subsets have different means, partially due to the fact that different numbers of items comprise subsets, as was noted earlier. It is interesting to observe in Exhibit I-14 the number of negative $\overline{D}$-scores. Two of these are significant at the 5-percent level for a two-tailed test (BI_4 and BI_6). Considering the traits that these scales are dealing with, and considering that the majority of both parents and teachers sampled felt that the children had generally improved in self-confidence and in finishing what they start, these results are puzzling. One possibility is that, in the process of losing over 90 percent of the matched 1-percent sample scores for various reasons, some sort of unusual selection process has occurred. The sample of children for whom there were matched pre/post Behavior Inventory scores available is quite different in composition on various socio-economic variables from either the PPVT sample or the PSI sample. This may be seen by noting the N's for different factor levels in the exhibits of 1-factor Behavior Inventory comparisons that follow. However, it is also possible that the Behavior Inventory scales and the Worker Evaluation Form items in fact tap quite different judgments and concepts in respondents about seemingly similar areas of observation.

Exhibits I-15 through I-24 list the comparisons of Behavior Inventory scores by age, sex, race, income, and urbanization. Tabulations for mother's education (High School graduates versus non-High School graduates) were made; however, errors in the data prevented the reporting of results for this factor. In addition, tabulations were made for family intactness. However, since the N for "Father Only" was zero and for "Mother Only" was six, this factor was dropped from further consideration. Moreover, there was a case involving the income

EXHIBIT I-15 COMPARISON OF BEHAVIOR INVENTORY SCORES BY FACTOR CATEGORIES - TOTAL ADJUSTMENT

FACTOR AND LEVEL	N	Pretest Mean ($\bar{X}$)	$\bar{D}_j$	$\hat{a}_j$	$\bar{X}_j - \bar{X}_k$	$\hat{a}_j - \hat{a}_k$	$\bar{X}_j - \bar{X}$	$\hat{a}_j - \hat{a}$	$\bar{D}_j - \bar{D}_k$	$\bar{D}_j - \bar{D}$
1. AGE										
a. Over 5	138	127.00	4.07*(1)	69.39	-2.02	4.22	-2.04	0.69	5.26	1.74
b. 5	210	129.02	-1.20	65.17	-2.06	-6.37	-0.01	-3.53*	-5.31	-3.52
c. Under 5	36	131.08	4.11	71.53	-4.08	-2.15	2.05	2.84	-0.05	1.78
Unweighted Average	-	129.04	2.33*	68.69	-	-	-	-	-	-
2. SEX										
a. Male	184	127.24	1.45	66.90	-2.00	-0.70	-1.00	-0.35	0.34	0.17
b. Female	205	129.25	1.11	67.59	2.00	0.70	1.00	0.35	-0.34	-0.17
Unweighted Average	-	128.25	1.28	67.24	-	-	-	-	-	-
3. RACE										
a. White	173	128.49	-0.23	65.85	0.56	-2.78	0.28	-1.39	-3.06	-1.53
b. Negro	186	127.91	2.83	68.62	-0.56	2.78	-0.28	1.39	3.06	1.53
Unweighted Average	-	128.19	1.30	67.24	-	-	-	-	-	-
4. FAMILY INCOME										
a. Less than $3,000	362	128.62	0.77	66.92	2.52	-3.76	1.26	-1.88	-5.04	-2.52
b. $3,000 or More	38	126.11	5.82	70.68	-2.52	3.76	-1.26	1.88	5.04	2.52
Unweighted Average	-	127.36	3.29*	68.80	-	-	-	-	-	-
5. URBANIZATION										
a. Urban	270	128.84	1.01	67.27	0.86	1.38	0.43	0.69	0.94	0.47
b. Rural	92	127.97	0.08	65.89	-0.86	-1.38	-0.43	-0.69	-0.94	-0.47
Unweighted Average	-	128.40	0.54	66.58	-	-	-	-	-	-

Note: (1) An Asterisk (*) indicates $p < .05$.

EXHIBIT I-16 COMPARISON OF BEHAVIOR INVENTORY SCORES BY FACTOR CATEGORIES - SUBTEST 1: SOCIABILITY

FACTOR AND LEVEL	N	Pretest Mean ($\bar{X}$)	$\bar{D}_j$	$\hat{a}_j$	$\bar{X}_j - \bar{X}_k$	$\hat{a}_j - \hat{a}_k$	$\bar{X}_j - \bar{X}$	$\hat{a}_j - \hat{a}$	$\bar{D}_j - \bar{D}_k$	$\bar{D}_j - \bar{D}$
1. AGE										
a. Over 5	138	21.69	1.14*(1)	17.38	-1.05	0.22	-1.08	-0.67	1.00	0.14
b. 5	210	22.74	0.13	17.17	-1.15	-2.45*	-0.03	-0.89	-1.58	-0.86
c. Under 5	36	23.89	1.72	19.62	-2.20	-2.23*	1.11	1.56*	-0.58	0.72
Unweighted Average	-	22.77	1.00*	18.06	-	-	-	-	-	-
2. SEX										
a. Male	184	21.83	1.00*	17.35	-1.10*	-0.24	-0.55*	-0.12	0.58	0.29
b. Female	205	22.93	0.41	17.60	1.10*	0.24	0.55*	0.12	-0.58	-0.29
Unweighted Average	-	22.38	0.70*	17.47	-	-	-	-	-	-
3. RACE										
a. White	173	22.42	0.19	16.99	-0.06	-1.16*	-0.03	-0.58*	-1.12*	-0.56*
b. Negro	186	22.48	1.31*	18.15	0.06	1.16*	0.03	0.58*	1.12*	0.56*
Unweighted Average	-	22.45	0.75*	17.50	-	-	-	-	-	-
4. FAMILY INCOME										
a. Less than $3,000	-	-	-	-	-	-	-	-	-	-
b. $3,000 or More	-	-	-	-	-	-	-	-	-	-
Unweighted Average	-	-	-	-	-	-	-	-	-	-
5. URBANIZATION										
a. Urban	270	22.70	0.75*	17.76	0.64	1.28*	0.32	0.64*	0.80	0.40
b. Rural	92	22.07	-0.05	16.47	-0.64	-1.28*	-0.32	-0.64*	-0.80	-0.40
Unweighted Average	-	22.38	0.35	17.12	-	-	-	-	-	-

Note: (1) An asterisk (*) indicates $p < .05$.

EXHIBIT I-17 COMPARISON OF BEHAVIOR INVENTORY SCORES BY FACTOR CATEGORIES - SUBTEST 2: INDEPENDENCE

FACTOR AND LEVEL	N	Pretest Mean ($\overline{X}$)	$\overline{D}_j$	$\hat{a}_j$	$\overline{X}_j - \overline{X}_k$	$\hat{a}_j - \hat{a}_k$	$\overline{X}_j - \overline{X}$	$\hat{a}_j - \hat{a}$	$\overline{D}_j - \overline{D}_k$	$\overline{D}_j - \overline{D}$
1. AGE										
a. Over 5	138	14.37	0.22	6.88	-0.08	0.69	0.13	0.26	0.73	0.19
b. 5	210	14.45	-0.51*(1)	6.19	0.56	-0.61	0.21	-0.43	-0.87	-0.53
c. Under 5	36	13.89	0.36	6.80	0.48	0.08	-0.35	0.18	-0.14	0.34
Unweighted Average	-	14.24	-	6.62	-	-	-	-	-	-
2. SEX										
a. Male	184	14.32	-0.01	6.62	-0.04	0.22	-0.02	0.11	0.24	0.12
b. Female	205	14.36	-0.25	6.41	0.04	-0.22	0.02	-0.11	-0.24	-0.12
Unweighted Average	-	14.34	-0.13	6.52	-	-	-	-	-	-
3. RACE										
a. White	173	14.27	-0.30	6.31	-0.10	-0.30	-0.05	-0.15	-0.26	-0.13
b. Negro	186	14.36	-0.04	6.61	0.10	0.30	0.05	0.15	0.26	0.13
Unweighted Average	-	14.31	-0.17	6.46	-	-	-	-	-	-
4. FAMILY INCOME										
a. Less than $3,000	362	14.38	-0.23	6.43	0.02	-0.88*	0.01	-0.44*	-0.90	-0.45
b. $3,000 or More	38	14.37	0.66	7.32	-0.02	0.88*	-0.01	0.44*	0.90	0.45
Unweighted Average	-	14.37	0.21	6.87	-	-	-	-	-	-
5. URBANIZATION										
a. Urban	270	14.33	-0.30	6.34	-0.22	-0.38	-0.11	-0.19	-0.28	-0.14
b. Rural	92	14.54	-0.03	6.71	0.22	0.38	0.11	0.19	0.28	0.14
Unweighted Average	-	14.43	-0.17	6.52	-	-	-	-	-	-

Note: (1) An asterisk (*) indicates $p < .05$.

EXHIBIT I-18 COMPARISON OF BEHAVIOR INVENTORY SCORES BY FACTOR CATEGORIES - SUBTEST 3: CURIOSITY

FACTOR AND LEVEL	N	Pretest Mean ($\overline{X}$)	$\overline{D}_j$	$\hat{a}_j$	$\overline{X}_j - \overline{X}_k$	$\hat{a}_j - \hat{a}_k$	$\overline{X}_j - \overline{X}$	$\hat{a}_j - \hat{a}$	$\overline{D}_j - \overline{D}_k$	$\overline{D}_j - \overline{D}$
1. AGE										
a. Over 5	138	20.28	1.22*(1)	11.52	-0.71	0.45	-0.76	-0.36	0.81	0.04
b. 5	210	20.98	0.42	11.07	-0.94	-1.97	-0.08	-0.81	-1.50	-0.77
c. Under 5	36	21.92	1.92*	13.05	-1.64	-1.53	0.86	1.17	-0.69	0.73
Unweighted Average	-	21.06	1.19*	11.88	-	-	-	-	-	-
2. SEX										
a. Male	184	20.50	0.90*	11.31	-0.46	-0.12	-0.23	-0.06	0.12	0.06
b. Female	205	20.97	0.78*	11.42	0.46	0.12	0.23	0.06	-0.12	-0.06
Unweighted Average	-	20.73	0.84*	11.37	-	-	-	-	-	-
3. RACE										
a. White	173	21.16	0.56	11.31	0.80	-0.40	0.40	-0.20	-0.80	-0.40
b. Negro	186	20.37	1.37*	11.71	-0.80	0.40	-0.40	0.20	0.80	0.40
Unweighted Average	-	20.76	0.96*	11.51	-	-	-	-	-	-
4. FAMILY INCOME										
a. Under $3,000	362	20.74	0.86*	11.39	0.24	0.008	0.12	0.004	-0.12	-0.06
b. $3,000 or More	38	20.50	0.97	11.38	-0.24	-0.008	-0.12	-0.004	0.12	0.06
Unweighted Average	-	20.62	0.92*	11.39	-	-	-	-	-	-
5. URBANIZATION										
a. Urban	270	20.92	1.06*	11.69	0.70	1.16*	0.35	0.58*	0.80	0.40
b. Rural	92	20.23	0.26	10.53	-0.70	-1.16*	-0.35	-0.58*	-0.80	-0.40
Unweighted Average	-	20.57	0.66*	11.11	-	-	-	-	-	-

Note: (1) An asterisk (*) indicates $p < .05$.

EXHIBIT I-19 COMPARISON OF BEHAVIOR INVENTORY SCORES BY FACTOR CATEGORIES - SUBTEST 4: PERSISTENCE

FACTOR AND LEVEL	N	Pretest Mean ($\bar{X}$)	$\bar{D}_j$	$\hat{a}_j$	$\bar{X}_j - \bar{X}_k$	$\hat{a}_j - \hat{a}_k$	$\bar{X}_j - \bar{X}$	$\hat{a}_j - \hat{a}$	$\bar{D}_j - \bar{D}_k$	$\bar{D}_j - \bar{D}$
1. AGE										
a. Over 5	138	9.84	-0.34	4.23	0.38	0.39	0.37	0.32	0.21	0.15
b. 5	210	9.46	-0.55*(1)	3.84	0.35	0.19	-0.01	-0.06	0.03	-0.06
c. Under 5	36	9.11	-0.58	3.64	0.73	0.58	-0.36	-0.26	0.24	-0.09
Unweighted Average	-	9.47	-0.49*	3.90	-	-	-	-	-	-
2. SEX										
a. Male	184	9.93	-0.65*	3.96	0.62	-0.02	0.31*	-0.01	-0.32	-0.16
b. Female	205	9.30	-0.33*	3.99	-0.62	0.02	-0.31*	0.01	0.32	0.16
Unweighted Average	-	9.62	-0.49*	3.97	-	-	-	-	-	-
3. RACE										
a. White	173	9.72	-0.53*	3.98	0.24	0.12	0.12	0.06	0.01	0.003
b. Negro	186	9.47	-0.53*	3.86	-0.24	-0.12	-0.12	-0.06	0.01	-0.003
Unweighted Average	-	9.59	-0.53*	3.92	-	-	-	-	-	-
4. FAMILY INCOME										
a. Under $3,000	362	9.59	-0.56*	3.89	-0.10	-0.86*	-0.05	-0.43*	-0.82*	-0.41*
b. $3,000 or More	38	9.68	0.26	4.76	0.10	0.86*	0.05	0.43*	0.82*	0.41*
Unweighted Average	-	9.64	-0.15	4.33	-	-	-	-	-	-
5. URBANIZATION										
a. Urban	270	9.59	-0.67*	3.78	-0.02	-0.44	-0.01	-0.22	-0.42	-0.21
b. Rural	92	9.61	-0.24	4.22	0.02	0.44	0.01	0.22	0.42	0.21
Unweighted Average	-	9.60	-0.45*	4.00	-	-	-	-	-	-

Note: (1) An asterisk (*) indicates $p < .05$.

EXHIBIT I-20 COMPARISON OF BEHAVIOR INVENTORY SCORES BY FACTOR CATEGORIES - SUBTEST 5: EMOTIONALITY

FACTOR AND LEVEL	N	Pretest Mean ($\bar{X}$)	$\bar{D}_j$	$\hat{a}_j$	$\bar{X}_j - \bar{X}_k$	$\hat{a}_j - \hat{a}_k$	$\bar{X}_j - \bar{X}$	$\hat{a}_j - \hat{a}$	$\bar{D}_j - \bar{D}_k$	$\bar{D}_j - \bar{D}$
1. AGE										
a. Over 5	138	21.90	1.50*(1)	8.54	-0.78	1.05	-1.02	0.45	1.30	0.78
b. 5	210	22.68	0.20	7.49	-1.52	-0.73	-0.25	-0.59	-0.24	-0.51
c. Under 5	36	24.19	0.44	8.22	-2.30	0.32	1.27	0.14	1.06	-0.27
Unweighted Average	-	22.92	0.72*	8.08	-	-	-	-	-	-
2. SEX										
a. Male	184	21.96	0.69	7.74	-0.96	-0.36	-0.48	-0.18	-0.04	-0.02
b. Female	205	22.93	0.73*	8.09	0.96	0.36	0.48	0.18	0.04	0.02
Unweighted Average	-	22.44	0.71*	7.92	-	-	-	-	-	-
3. RACE										
a. White	173	21.90	0.50	7.54	-0.94	-0.78	-0.47	-0.39	-0.48	-0.24
b. Negro	186	22.85	0.97*	8.32	0.94	-0.78	0.47	0.39	0.48	0.24
Unweighted Average	-	22.38	0.74*	7.93	-	-	-	-	-	-
4. FAMILY INCOME										
a. Under $3,000	362	22.47	0.72*	7.94	-0.12	0.06	-0.06	0.03	0.08	0.04
b. $3,000 or More	38	22.53	0.63	7.87	0.12	-0.06	0.06	-0.03	-0.08	-0.04
Unweighted Average	-	22.50	0.67*	7.90	-	-	-	-	-	-
5. URBANIZATION										
a. Urban	270	22.60	0.81*	8.07	0.48	0.54	0.24	0.27	0.38	0.19
b. Rural	92	22.11	0.43	7.54	-0.48	-0.54	-0.24	-0.27	-0.38	-0.19
Unweighted Average	-	22.35	0.62*	7.81	-	-	-	-	-	-

Note: (1) An asterisk (*) indicates $p < .05$.

EXHIBIT I-21 COMPARISON OF BEHAVIOR INVENTORY SCORES BY FACTOR CATEGORIES - SUBTEST 6: SELF-CONFIDENCE

FACTOR AND LEVEL	N	Pretest Mean ($\bar{X}$)	$\bar{D}_j$	$\hat{a}_j$	$\bar{X}_j - \bar{X}_k$	$\hat{a}_j - \hat{a}_k$	$\bar{X}_j - \bar{X}$	$\hat{a}_j - \hat{a}$	$\bar{D}_i - \bar{D}_k$	$\bar{D}_j - \bar{D}$
1. AGE										
a. Over 5	138	8.62	-0.26	4.31	0.10	0.23	0.34	0.22	0.17	0.04
b. 5	210	8.52	-0.43	4.08	0.82	0.20	0.24	-0.01	-0.24	-0.14
c. Under 5	36	7.69	-0.19	3.88	0.93	0.43	-0.58	-0.21	-0.07	0.10
Unweighted Average	-	8.28	-0.30*(1)	4.09	-	-	-	-	-	-
2. SEX										
a. Male	184	8.75	-0.52*	4.11	-	-	0.25	-0.04	-	-0.17
b. Female	205	8.26	-0.19	4.19	-	-	-0.25	0.04	-	0.17
Unweighted Average	-	8.50	-0.35*	4.15	-	-	-	-	-	-
3. RACE										
a. White	173	8.65	-0.29	4.29	-	-	0.12	0.17	-	0.11
b. Negro	186	8.40	-0.51*	3.94	-	-	-0.12	-0.17	-	-0.11
Unweighted Average	-	8.53	-0.40*	4.11	-	-	-	-	-	-
4. FAMILY INCOME										
a. Under $3,000	362	8.54	-0.40*	4.12	-	-	0.09	-0.17	-	-0.21
b. $3,000 or More	38	8.37	0.03	4.46	-	-	-0.09	0.17	-	0.21
Unweighted Average	-	8.45	-0.19	4.29	-	-	-	-	-	-
5. URBANIZATION										
a. Urban	270	8.49	-0.57*	3.93	-	-	-0.10	-0.38	-	-0.33*
b. Rural	92	8.70	0.09	4.69	-	-	0.10	0.38	-	0.33*
Unweighted Average	-	8.59	-0.24	4.31	-	-	-	-	-	-

Note: (1) An asterisk (*) indicates $p < .05$.

EXHIBIT I-22 COMPARISON OF BEHAVIOR INVENTORY SCORES BY FACTOR CATEGORIES - SUBTEST 7: JEALOUSY, ATTENTION-SEEKING

FACTOR AND LEVEL	N	Pretest Mean (X)	$\bar{D}_j$	$\hat{\alpha}_j$	$\bar{X}_j - \bar{X}_k$	$\hat{\alpha}_j - \hat{\alpha}_k$	$\bar{X}_j - \bar{X}$	$\hat{\alpha}_j - \hat{\alpha}$	$\bar{D}_j - \bar{D}_k$	$\bar{D}_j - \bar{D}$
1. AGE										
a. Over 5	138	11.09	0.21	5.02	-0.12	0.28	-0.29	-0.02	0.33	0.11
b. 5	210	11.20	-0.12	4.73	-0.63	-0.62	-0.17	-0.30	-0.35	-0.23
c. Under 5	36	11.83	0.22	5.35	-0.74	-0.34	0.46	0.32	-0.01	0.12
Unweighted Average	-	11.38	0.10	5.03	-	-	-	-	-	-
2. SEX										
a. Male	184	10.92	0.20	4.93	-0.54*	0.10	-0.27*(1)	0.05	0.34	0.17
b. Female	205	11.47	-0.15	4.82	0.54*	-0.10	0.27*	-0.05	-0.34	-0.17
Unweighted Average	-	11.19	0.03	4.88	-	-	-	-	-	-
3. RACE										
a. White	173	11.09	-0.05	4.75	-0.12	-0.26	-0.06	-0.13	-0.20	-0.10
b. Negro	186	11.22	0.16	5.02	0.12	0.26	0.06	0.13	0.20	0.10
Unweighted Average	-	11.15	0.05	4.89	-	-	-	-	-	-
4. FAMILY INCOME										
a. Under $3,000	362	11.25	-0.02	4.85	0.52	-0.32	0.26	-0.16	-0.54	-0.27
b. $3,000 or More	38	10.74	0.53	5.18	-0.52	0.32	-0.26	0.16	0.54	0.27
Unweighted Average	-	10.99	0.25	5.02	-	-	-	-	-	-
5. URBANIZATION										
a. Urban	270	11.19	0.04	4.89	-0.24	0.12	-0.12	0.06	0.24	0.12
b. Rural	92	11.43	-0.20	4.76	0.24	-0.12	0.12	-0.06	-0.24	-0.12
Unweighted Average	-	11.31	-0.08	4.82	-	-	-	-	-	-

Note: (1) An asterisk (*) indicates $p < .05$.

EXHIBIT I-23 COMPARISON OF BEHAVIOR INVENTORY SCORES BY FACTOR CATEGORIES - SUBTEST 8: ACHIEVEMENT

FACTOR AND LEVEL	N	Pretest Mean ($\bar{X}$)	$\bar{D}_j$	$\hat{a}_j$	$\bar{X}_j - \bar{X}_k$	$\hat{a}_j - \hat{a}_k$	$\bar{X}_j - \bar{X}$	$\hat{a}_j - \hat{a}$	$\bar{D}_j - \bar{D}_k$	$\bar{D}_j - \bar{D}$
1. AGE										
a. Over 5	138	14.57	-0.01	6.35	0.71	0.62	0.58	0.41	0.31	0.15
b. 5	210	13.87	-0.33	5.72	0.34	-0.01	-0.12	-0.21	-0.16	-0.16
c. Under 5	36	13.53	-0.17	5.74	1.04	0.61	-0.46	-0.20	0.15	0.00
Unweighted Average	-	13.99	-0.17	5.94	-	-	-	-	-	-
2. SEX										
a. Male	184	14.28	-0.32	5.92	0.38	-0.08	0.19	-0.04	-0.26	-0.13
b. Female	205	13.89	-0.06	6.01	-0.38	0.08	-0.19	0.04	0.26	0.13
Unweighted Average	-	14.09	-0.19	5.96	-	-	-	-	-	-
3. RACE										
a. White	173	14.14	-0.28	5.90	0.20	0.02	0.10	0.01	-0.06	-0.03
b. Negro	186	13.95	-0.21	5.88	-0.20	-0.02	-0.10	-0.01	0.06	0.03
Unweighted Average	-	14.05	-0.24	5.89	-	-	-	-	-	-
4. FAMILY INCOME										
a. Under $3,000	362	14.11	-0.26	5.90	0.12	-0.58	0.06	-0.29	-0.64	-0.32
b. $3,000 or More	38	14.00	0.37	6.48	-0.12	0.58	-0.06	0.29	0.64	0.32
Unweighted Average	-	14.06	0.05	6.19	-	-	-	-	-	-
5. URBANIZATION										
a. Urban	270	14.04	-0.29	5.84	-0.28	-0.24	-0.14	-0.12	-0.10	-0.05
b. Rural	92	14.33	-0.18	6.07	0.28	0.24	0.14	0.12	0.10	0.05
Unweighted Average	-	14.18	-0.24	5.95	-	-	-	-	-	-

EXHIBIT I-24 COMPARISON OF BEHAVIOR INVENTORY SCORES BY FACTOR CATEGORIES - SUBTEST 9: LEADERSHIP

FACTOR AND LEVEL	N	Pretest Mean ($\overline{X}$)	$\overline{D}_j$	$\hat{a}_j$	$\overline{X}_j - \overline{X}_k$	$\hat{a}_j - \hat{a}_k$	$\overline{X}_j - \overline{X}$	$\hat{a}_j - \hat{a}$	$\overline{D}_j - \overline{D}_k$	$\overline{D}_j - \overline{D}$
1. AGE										
a. Over 5	138	4.64	0.39*[1]	2.59	-0.48*	0.17	-0.29	-0.004	0.40	0.13
b. 5	210	5.13	-0.00	2.42	0.10	-0.35	0.19	0.17	-0.40	-0.26
c. Under 5	36	5.03	0.39	2.77	-0.38	-0.18	0.09	-0.17	0.00	0.13
Unweighted Average	-	4.93	0.26*	2.59	-	-	-	-	-	-
2. SEX										
a. Male	184	4.76	0.16	2.41	-0.40*	-0.18	-0.20*	-0.09	-	0.001
b. Female	205	5.15	0.16	2.60	0.40*	0.18	0.20*	0.09	-	-0.001
Unweighted Average	-	4.95	0.16*	2.51	-	-	-	-	-	-
3. RACE										
a. White	173	5.12	-0.02	2.40	0.30	-0.20	0.15	-0.10	-0.34*	-0.17*
b. Negro	186	4.83	0.32*	2.61	-0.30	0.20	-0.15	0.10	0.34*	0.17*
Unweighted Average	-	4.97	0.15	2.50	-	-	-	-	-	-
4. FAMILY INCOME										
a. Under $3,000	362	4.98	0.13	2.48	0.14	-0.20	0.07	-0.10	-0.26	-0.13
b. $3,000 or More	38	4.84	0.39	2.69	-0.14	0.20	-0.07	0.10	0.26	0.13
Unweighted Average	-	4.91	0.26*	2.59	-	-	-	-	-	-
5. URBANIZATION										
a. Urban	270	4.99	0.17	2.53	0.04	0.18	0.02	0.09	0.18	0.09
b. Rural	92	4.96	0.00	2.35	-0.04	-0.18	-0.02	-0.09	-0.18	-0.09
Unweighted Average	-	4.97	0.09	2.44	-	-	-	-	-	-

Note: (1) An asterisk (*) indicates $p < .05$.

factor in which the data obtained were in error. Thus, there is a blank row in one of the exhibits (I-16).[1] There is one exhibit for the Total Adjustment score (BI_T) and one for each of the nine categories of scales (BI_1 through BI_9). The latter are, as elsewhere, in the order listed and named earlier.

We shall not undertake a detailed analysis of the results as summarized in each exhibit. The asterisks, which indicate a significant difference at the 5-percent level, make it relatively easy for the reader, who is by now very familiar with the format and meaning of the results, to select his own observations for interpretation. It should be noted here again that tests of the significance of $\overline{D}_j$'s were two-tailed tests. There are, however, a number of relationships shown by the data in the exhibits which should be noted. For example, consider Exhibit I-15, which presents results of analyses of the Total Adjustment scores on the Behavior Inventory. It may be seen that the order of standing on pretest scores on a number of classifications is reversed from that which has been typical of the two performance tests (PPVT and PSI). The younger children scored higher than the older children, girls scored higher than boys, the lower income children scored higher than the higher income children, and the urban children scored higher than the rural children. The differences are not statistically significant. Nonetheless, there is a consistent reversal of tendencies or trends observed elsewhere. Furthermore, there are a number of cases throughout in which the groups with the higher pretest means showed noticeably larger gains between pretest and posttest. This tendency is reflected in some of the significant differences of differences and adjusted differences indicated in the exhibits by asterisks.

---

[1] To the best of our knowledge, the data presented throughout is accurate. Errors arising from various sources have been eliminated. It is possible, however, that an occasional anomaly may still exist. We have attempted to facilitate the evaluation of data and the elimination of misleading information by presenting as much data as possible to permit others to check results. We are keenly aware of the importance of reliable information in as newly explored an area as that of the socially disadvantaged child.

Finally, there are four subtests in which Negroes were rated higher on the average than whites, although again the differences are not statistically significant.

The trends found in the results with the Behavior Inventory are of particular interest, since this instrument was the only one specifically designed to make a comprehensive assessment of detailed social and emotional behavioral variables. The Psychological Screening Procedure provided more or less global impressions of the children. The Behavior Inventory calls out more specific behavioral characteristics.

As will be seen in the analysis of intertest correlations which follows, it appears that the Behavior Inventory has indeed measured a unique and crucial area of development of culturally deprived children (see Exhibit II-8 in the first volume of this report).

C. Intertest and Intratest Relationships

A question of great interest concerns the relationships between and within the three main test instruments used in the 1965 Project Head Start. To obtain information about such relationships, it appeared feasible to perform a canonical analysis, using as the antecedent or "predictor" variables various total and subtest scores available, and as the outcome or "criteria" variables the D-scores obtained on the tests (see Reference 126 for a discussion of the methodology). The tests selected for analysis were:

- PPVT
- PSI Total Score (PSI_T)
- PSI Vocabulary and Information (PSI_1)
- PSI Numerical Relations (PSI_2)
- PSI Concepts II (PSI_4)
- PSI Following Instructions (PSI_6)
- BI Total Adjustment Score (BI_T)
- BI Sociability (BI_1)
- BI Curiosity (BI_3)
- BI Emotionality (BI_5)
- BI Consistency Score (BI_C)

Correlation matrices, canonical correlation coefficients, and canonical vector weights were obtained using an existing canonical analysis program.[1]

As it turned out, the total number of matched forms for all variables was 43. Nonetheless, some of the interrelationships that emerged are noteworthy and are included in this report for their value in directing attention to hypotheses to be examined in future studies. Exhibit I-25 shows correlation coefficients obtained between the pretest variables. For ease of reading and analysis, only those coefficients that exceeded ±0.35 were put in the table. The one exception is the Behavior Inventory Consistency score (BI_C), for which the intercorrelations have been reported, regardless. Exhibit I-26 gives the correlation coefficients for the difference scores on the test variables. Exhibit I-27 presents the intercorrelations of the pretest variables ("predictors") and change scores ("criteria") for all variables. In this case, all coefficients of ±0.30 or more are stated. Although our cutoff level for listing a coefficient was arbitrary--i.e., not based on a calculation of significance--we shall speak as if the coefficients listed were significant and those unlisted not significant. (The correlation of variables with themselves is, of course, 1.0; this value has also been omitted from the tables.)

The most striking fact about Exhibit I-25, the pretest score intercorrelations, is the lack of correlation between any of the three instruments. To the extent that this small sample is at all indicative, each of the instruments appears to be measuring a different function.

The intra-PSI correlations can be examined in the light of pretest intercorrelations reported by Caldwell for her standardization sample (see Exhibit I-3). She found a higher intercorrelation between subtest 1 (Information and Vocabulary) and the total test score than that reported

---

[1] Dixon, W.J., ed., "BMD 06M Canonical Analysis," BMD Biomedical Computer Programs. Los Angeles: Health Sciences Computing Facility, Department of Preventive Medicine and Public Health, University of California, 1 January 1964

EXHIBIT I-25 INTERCORRELATIONS OF PPVT, PSI, AND BI PRETEST SCORES(1)

	PPVT	PSI$_T$	PSI$_1$	PSI$_2$	PSI$_4$	PSI$_6$	BI$_T$	BI$_1$	BI$_3$	BI$_5$	BI$_C$
PPVT	-	-	-	-	-	-	-	-	-	-	-
PSI$_T$	-	-	.67	-	.74	.67	-	-	-	-	-
PSI$_1$	-	-	-	-	.39	-	-	-	-	-	-
PSI$_2$	-	-	-	-	-	-	-	-	-	-	-
PSI$_4$	-	-	-	-	-	.58	-	-	-	-	-
PSI$_6$	-	-	-	-	-	-	-	-	-	-	-
BI$_T$	-	-	-	-	-	-	-	.77	.77	.73	-.13
BI$_1$	-	-	-	-	-	-	-	-	.78	.56	-.17
BI$_3$	-	-	-	-	-	-	-	-	-	.67	-.16
BI$_5$	-	-	-	-	-	-	-	-	-	-	-.04
BI$_C$	-	-	-	-	-	-	-	-	-	-	-

Note: (1) Only correlations larger than ± .35 are shown, except for correlations concerning the Behavior Inventory Consistency score (BI$_C$). N = 43.

EXHIBIT I-26 INTERCORRELATIONS OF PPVT, PSI, AND BI DIFFERENCE SCORES(1)

	PPVT	PSI_T	PSI_1	PSI_2	PSI_4	PSI_6	BI_T	BI_1	BI_3	BI_5	BI_C
PPVT	-	-	-	-	-	-	-	-	-	-	-
PSI_T	-	-	.62	-	-	-	-	-	-	-	-
PSI_1	-	-	-	.53	-	-	-	-	-	-	-
PSI_2	-	-	-	-	-	-	-	-	-	-	-
PSI_4	-	-	-	-	-	.65	-	-	-	-	-
PSI_6	-	-	-	-	-	-	-	-	-	-	-
BI_T	-	-	-	-	-	-	-	.84	.80	.70	-.67
BI_1	-	-	-	-	-	-	-	-	.75	.52	-.75
BI_3	-	-	-	-	-	-	-	-	-	.76	-.62
BI_5	-	-	-	-	-	-	-	-	-	-	-.46
BI_C	-	-	-	-	-	-	-	-	-	-	-

Note: (1) Only correlations larger than ± .35 are shown, except for correlations concerning the Behavior Inventory Consistency score (BI_C). N = 43.

EXHIBIT I-27 INTERCORRELATIONS OF PPVT, PSI, AND BI PRETEST (PREDICTORS) AND DIFFERENCE SCORES (CRITERIA)(1)

	Criteria										
Predictors	$PPVT_D$	PSI_{TD}	PSI_{1D}	PSI_{2D}	PSI_{4D}	PSI_{6D}	BI_{TD}	BI_{1D}	BI_{3D}	BI_{5D}	BI_{CD}
PPVT	-.32	-	-	-	-	-	-	-.31	-	-	-
PSI_T	-	-.41	-	-	.35	-	-	-	-	-	-
PSI_1	-	-	-	-	-	-	-	-	-	-	-
PSI_2	-	-	-	-	-	-	-	-	-	-	-
PSI_4	-	-.40	-	-	.31	-	-	-	-	-	-
PSI_6	.30	-	-	-	.48	.43	-	-	-	-	-
BI_T	-	-	-	-	-	-	-	-	-	-	.23
BI_1	-	-	-	-	-	-	-	-	-	-	.14
BI_3	-	-	-	-	-	-	-	-	-	-	.19
BI_5	-	-	-	-	-	-	-	-	-	-	.15
BI_C	-	-	-	-	-	-	.58	.67	.62	.40	-.74

Note: (1) Only correlations larger than ± .30 are shown, except for correlations concerning the Behavior Inventory Consistency score (BI_C). N = 43.

in Exhibit I-25. Similarly, the correlations in the exhibit between PSI_T and PSI_1 and PSI_4 are lower than those reported by Caldwell. However, the correlations reported here between PSI_T and PSI_6, and PSI_4 and PSI_6, are about the same as those found by Caldwell.

The Behavior Inventory subtests selected all appear to correlate fairly highly with the Total Adjustment score (BI_T), and somewhat less so with each other. There is a small but consistently negative relationship between the Consistency Score (BI_C) and the other Behavior Inventory scores. That is, the better (lower) the consistency score, the higher (better) the total or subtest scores.[1] The negative correlations thus indicate a type of validity of the consistency scores, since low consistency scores are indicative of an absence of contradictory ratings.

The data in Exhibit I-26 suggest what would be expected from the correlations in Exhibit I-25--namely, that pretest scores on variables that are correlated are positively correlated with change scores on those variables. An exception is the correlation of D-scores found between PSI_1 and PSI_2, which did not have a significant pretest intercorrelation. Of further interest is the very strong negative relationship between the BI_C scores and the other BI change scores. A BI_C change score was obtained by subtracting a pretest BI_C score from the posttest BI_C score. Thus, the greater the change toward consistency, the lower the BI_C change score. The negative correlations shown in Exhibit I-26 indicate, therefore, that improvements from pretest to posttest on the various tests are correlated with an increase in consistency or discrimination of the raters.

Exhibit I-27 lists intercorrelations between pretest variables (labeled "predictors" here) and difference scores (which we have called "criteria"). The negative correlations (for example, between PPVT and $PPVT_D$) are what would be expected from the general observation that the lower pretest scorers tend to show relatively more gain than the higher ones. The positive correlations are less obviously interpretable.

---

[1] It should be remembered that a high total or subtest score indicates generally a high rating on positive attributes and a low rating on negative ones.

Finally, Exhibit I-28 lists canonical vectors for the three largest canonical correlation coefficients (R_C). Frequently, only the first root and corresponding canonical correlation coefficient is of interest, although it has been found that other roots and correlations may be of interest for some research problems (Reference 126, page 37). We have therefore listed all eleven canonical correlations in order, and provided the vector weights for the second and third, as well as the first, since these R_C's were so close to the first. The vectors are the weights of the variables whose linear combination maximizes the correlation between the canonical variates. In view of the enormous losses of samples that occurred in arriving at the inputs for this analysis (it will be recalled that N = 43), we will not attempt to speculate on possible interpretations of the vectors, although a detailed examination of relationships could reveal hypotheses of further interest. We have throughout this report attempted to provide data with which others may make their own interpretations and evaluations in addition or in contradistinction to ours, in order not to pre-empt the interests and special skills of experts in the various areas of child development. It is in this spirit that the vectors are reported here.

It is our opinion that the canonical analysis, as it turned out, has been of value primarily for the correlation matrices that were generated. Future research studies of Head Start children, however, may well include hypotheses about continuous multiple antecedent and criterion variables that would make canonical analysis a valuable tool.

D. Conclusion

There is little in the analyses presented here that changes conclusions already drawn in Section V of the first volume of this report. The following points seem warranted, however, even though a few are repetitions of earlier statements.

EXHIBIT I-28 CANONICAL VECTORS FOR THE THREE HIGHEST CANONICAL CORRELATIONS(1)

1. R_C = .87		2. R_C = .82		3. R_C = .77	
Predictors	Criteria	Predictors	Criteria	Predictors	Criteria
.60 PSI_T	.53 BI_C	.60 PSI_6	.50 BI_1	.90 BI_3	.59 BI_1
.24 BI_5	.34 BI_T	.39 BI_T	.48 PSI_6	.60 BI_T	.49 PSI_T
.16 BI_3	.21 PSI_1	.31 BI_C	.38 PPVT	.44 PSI_1	.44 BI_C
.10 PSI_6	.16 PSI_6	.19 PSI_4	.34 PSI_1	.41 PSI_6	.27 PPVT
.05 PSI_2	.10 PSI_4	.10 PSI_1	.20 PSI_4	.16 PSI_2	.20 BI_T
.04 PPVT	.01 BI_5	.09 PSI_T	.19 BI_T	.01 PSI_4	.19 BI_3
-.048 BI_T	.001 PPVT	.01 BI_5	.04 BI_3	-.24 BI_C	.08 PSI_1
-.05 PSI_4	-.13 PSI_2	-.23 PSI_2	.03 BI_C	-.47 PPVT	-.18 PSI_6
-.32 BI_1	-.27 PSI_T	-.25 BI_3	-.12 PSI_2	-.55 BI_5	-.19 PSI_4
-.57 PSI_1	-.31 BI_1	-.35 BI_1	-.55 BI_5	-.84 PSI_T	-.37 PSI_2
-.76 BI_C	-.54 BI_3	-.40 PPVT	-.73 PSI_T	-.90 BI_3	-.96 BI_5

Note: (1) Remaining canonical correlations:

4. 0.75
5. 0.66
6. 0.52
7. 0.39
8. 0.32
9. 0.17
10. 0.10
11. 0.01

- Results in cognitive and perceptual areas of functioning typically show positive improvement or gain even for the brief interval between pre- and posttesting. While problems of reliability and practice effects do enter into an evaluation of results, we are inclined to agree with Pierce-Jones, et al., who wrote after analyzing their own and others' findings of pre/post differences on the PPVT and PSI: "We are disposed, on such grounds, to think that the changes we have found are real ones rather than mere statistical artifacts." (Reference 86).

- Not only are norms badly needed for the newer tests, but particular attention should be paid to the composition of standardization groups. The consistent and pervasive findings with respect to sex and urbanization, for example, and the tendencies associated with income level, suggest that norms based on middle-class urban or suburban children may be very misleading when applied to culturally deprived groups.

- There appear to be different orders of relationships between social and emotional behavioral measures and socio-economic characteristics of the children from those observed in the more cognitive areas of performance. There is a strong need for reliable data and measures of performance in this realm, and for further study of relationships between this aspect of developmental behavior and cognitive functioning in culturally deprived groups.

- The importance of attention to the mechanics of data collection and processing must again be stressed.

- There has been little consistent evidence of a differential effect of treatment associated with sub-classifications of the sample of Head Start children analyzed in this study. This does not necessarily mean that such effects did not occur. There is an urgent need for future studies specifically designed to investigate this area.